

FEDERATED MALAY STATES RAILWAYS.

ANNUAL REPORT FOR THE YEAR 1913.

REVIEW OF THE YEAR'S WORKING.

1. The year 1913 has seen a steady development in Railway business. Unfortunately the accounts do not readily lend themselves to comparisons with previous years, as the expenditure covers a period of $12\frac{1}{2}$ months and the revenue a period of 12 months only. It has previously been the practice for expenditure to date from December 16th of one year to December 15th of the next, but commencing with the 1913 report it has been decided to include expenditure from January 1st to December 31st of each year to correspond with the period for revenue. This has reduced the net profits on the year 1913 from \$3,050,184.41 to \$2,722,946.41 and the consequent interest on capital from 4.41 per cent. to 3.93 per cent. and at the same time affects all our statistical comparisons.

It has also been decided to exclude ballast train mileage from train mileage which further affects comparison with previous years.

The outstanding feature of the year was the purchase of the Singapore Railway from the Colonial Government, and which enables us to proceed with a scheme for re-constructing Tank Road Station and doubling the line to Bukit Timah, providing a station more in keeping with the importance of Singapore as our southern terminus, and sufficient siding and goods accomodation to enable us to keep pace with the rapidly increasing traffic.

Borings in the Johore Straits on the site of the proposed bridge were taken during the year, and preliminary plans of the bridge structure are now being prepared by the consulting engineers. It is important that this work should not be delayed, otherwise the Railway traffic will overtake the limits of capacity of the wagon ferries which do their work admirably.

The purchase of the Prai Dock and wharves from the Colonial Government was under consideration during the year and has since been completed.

A comprehensive scheme for new wharves has been prepared. With the opening of the line viâ Alor Star to Bangkok a large development of business between Penang and Bangkok must result, and large expenditure will be necessary at Prai during the next three or four years to enable us to handle this traffic.

The working of cargo at Port Swettenham has greatly improved in all directions and great credit is due to the officer in charge (Mr. Stewart) for the way in which he has supervised the work of the port. We are now in a satisfactory position as regards wagons, and with the delivery of the large number still on order, I anticipate that we shall be well in advance of immediate requirements.

MILEAGE.

2. The total mileage of lines open for traffic, including the Johore Line, on 31st December, 1913, was 771 miles, an increase of 36 miles 65 chains, made up as follows:

	M.	Ch.
Connaught Bridge Junction to Kapar (opened on 1st February, 1913)	11	62
Kapar to Jeram (opened on 1st June, 1913)	7	63
Jeram to Asam Jawa (opened on 1st September, 1913)	5	47
New Loop Line—Port Swettenham Junction to Salak South Junction (opened on 1st September, 1913)	5	46
Kuala Teh to Tembeling (opened on 15th May, 1913)	6	07
Total	36	65

The length of sidings was increased by 10 miles 25 chains, making a total of 102 miles 75 chains and 873 miles 75 chains of railroad in operation.

The Singapore Railway is, commencing this year, included as part of the Federated Malay States Railway system, this line having been purchased by the Federated Malay States Government early in 1913 at a total cost of \$4,136,000.

3. The Railway system now comprises :

	M.	Ch.
Prai to Johore Boundary	351	47
Singapore Line	19	41
East Coast Line, Gemas to Tembeling	116	53
Taiping to Port Weld	7	17
Ipoh to Tronoh Mines	15	50
Tapah Road to Telok Anson Wharf	17	58
Batu Junction to Batu Caves	5	21
Kuala Lumpur to Port Swettenham	26	77
Connaught Bridge Junction to Asam Jawa	25	12
New Loop Line, Port Swettenham Junction to Salak South Junction	5	46
Seremban to Port Dickson	24	66
Tampin to Malacca	21	13
Bahau to Kuala Pilah	12	78
	650	19
Leased Line—Johore State Railway	120	61
Total ...	771	00

4. The dates on which the various sections of main line and branches, since the commencement in 1885, were opened to traffic are shown in appendix O.

CAPITAL ACCOUNT (OPEN LINES).

5. The capital account of the Open Lines amounted to \$69,629,446.46 on 31st December, 1913:

Federated Malay States Railways—Open Lines	\$69,195,531.09
“ “ Motor Services	433,915.37
Total ...	\$69,629,446.46

This represents an increase of \$10,185,407.62 over the previous year, for which the following works and sections are responsible:

Steam Ferry Service... ..	\$ 7,789.43
Prai to Parit Buntar... ..	24,018.14
Parit Buntar to Taiping, including Port Weld Branch	69,172.08
Taiping to Kuala Kangsar	41,110.28
Kuala Kangsar to Telok Anson Wharf	450,775.57
Ipoh to Tronoh Mines	34,170.67
Tapah Road to Tanjong Malim	96,251.95
Tanjong Malim to Kajang, including Port Swettenham and Sultan Street-Salak South Branches	1,572,782.85
Connaught Bridge Junction to Asam Jawa	2,036,837.02
New Passenger Station, Kuala Lumpur	182,843.42
Railway Offices, Kuala Lumpur	10,799.94
Batu Junction to Batu Caves	11,508.68
Central Workshops	57,510.66
Kajang to Seremban	108,531.30
Seremban to Gemas	144,814.06
Seremban to Port Dickson	58,785.61
Tampin to Malacca	46,280.76
Gemas to Sementan	165,522.73
Bahau to Kuala Pilah	28,375.33
Semantan to Tembeling	842,081.28
Singapore Railway	4,210,435.86
	10,200,397.62
Automobile Service	Cr. 14,990.00
Total ...	\$10,185,407.62

6. Appendix A accompanying this report gives the distribution of the total capital account to sections and works.

7. The total expenditure on account of special services on capital account during the year amounted to \$6,811,541.72 (*vide* appendix K).

The principal items are as follows:

Four Rakes of Mail Type Coaches	\$	155,828.32
Five "H" Class Locomotives		178,466.38
Additional Goods Stock		811,948.07
New Station and Hotel, Ipoh		225,556.27
Completion of New Passenger Station, Kuala Lumpur ...		119,231.04
" Railway Hotel, Kuala Lumpur		63,612.38
New Wharf Accommodation, Port Swettenham		442,890.13
Additional Locomotives and Rolling Stock		179,421.30
Purchase of Singapore Railway		4,136,000.00

8. The average capital cost per mile of line open on 31st December, 1913, was \$106,415.78 as compared with \$99,333.04 at the end of 1912.

9. Special services on revenue account were responsible for an expenditure of \$1,107,696.75 as against \$1,119,210.83, a decrease of \$11,514.08 (*vide* appendix J).

CAPITAL ACCOUNT (LINES UNDER CONSTRUCTION AND SURVEYS).

10. The capital account of lines still under construction and surveys on 31st December, 1913, stood at \$9,806,762.55, an increase of \$4,523,535.01 over the amount at the end of 1912.

The total is made up as follows :

East Coast Railway, Kelantan Section	...	...	...	\$3,627,766.63
" " Pahang Section	...	...	...	1,035,352.62
Kedah Railway, Bukit Mertajam to Alor Star	...	...	...	3,333,426.02
Survey, Ayer Kuning to Jasin	...	...	...	23,516.23
Construction, Ayer Kuning to Jasin	...	...	...	206,631.02
Survey, Klang to Morib	...	...	...	14,950.59
" Kuang to Batang Berjuntai	...	...	...	22,807.48
Construction, Kuang to Batang Berjuntai	...	...	...	191,387.29
Doubling Line, Prai to Bukit Mertajam, and Alterations at Prai	...	...	...	139,442.35
Bridge over Johore Straits	...	...	...	42,895.34
Construction, Pudu to Ampang	...	...	...	244,185.60
Railway from Bagan Serai to Kuala Krau	...	...	...	122,837.19
Survey, Gunong Tahan Railway	...	...	...	2,271.40
" Pahang-Kelantan Boundary to Kota Bharu	...	...	...	47,666.51
Padang Java to Kuala Selangor	...	...	\$2,332,398.33	
Less estimated cost, Padang Java to Asam Jawa, transferred to Open Line	...	1,981,835.91	...	350,562.42
Trial Survey, East Coast Railway	...	...	...	117,763.07
Survey, Bukit Mertajam to Alor Star	...	...	...	28,874.35
Trial Survey, Kelantan to Tomoh	...	...	...	56,829.11
" Bukit Mertajam to Alor Star	...	...	...	22,063.86
Surveys of Possible New Lines	...	...	...	27,134.88
Trial Survey, Kelantan Boundary Northwards	...	...	...	43,767.42
Survey, Tembeling to Pahang Kelantan Boundary	...	...	...	18,459.95
" Kuala Semantan to Kelantan Frontier	...	...	...	79,742.01
" Bahan to Kuala Kuantan	...	...	...	641.99
" Ipoh to Gopeng	...	...	...	5,787.22
Total	...	...	...	\$9,806,762.55

REVENUE.

11. The gross earnings from all sources, including motor services, amounted to \$9,548,374 as compared with \$8,421,016.87 in 1912, an increase of \$1,127,357.13, or 13 per cent. Of this increase, passengers (including season tickets and excess fares) are responsible for \$640,745.69; goods and live stock, \$526,630.02; parcels, \$25,040.75; and horses, carriages and dogs, \$6,244.78; whilst there are decreases under the headings, special trains, sundry receipts, motor services and reimbursements of \$1,759.22, \$18,951.07, \$27,232.56 and \$23,361.26, respectively.

Compared with the sums estimated the earnings were as follows :

Actual passengers, goods, etc.	...	...	...	...	\$9,548,374
Estimated " " "	...	...	...	...	8,200,000
Increase over estimate	...	...	...	...	\$1,348,374

As regards the increase in passenger traffic the following figures are of interest :

	1913.		1912.		Increase.	
	Number.	Amount.	Number.	Amount.	Number.	Amount.
		\$ c.		\$ c.		\$ c.
First class ...	286,555	489,629.11	243,055	442,487.28	43,500	47,141.83
Second „ ...	1,607,207	984,204.56	1,091,346	732,167.05	515,861	252,037.51
Third „ ...	11,249,897	3,668,736.44	10,254,872	3,336,157.16	995,025	332,579.28
Total ...	13,143,659	5,142,570.11	11,589,273	4,510,811.49	1,554,386	631,758.62

The increase in tonnage amounts to 184,378 tons, 1,172,794 tons having been carried in 1913 as compared with 988,416 tons in 1912. The following stations show the largest increases in forwarded traffic :

	Tons.
Prai	41,771
Port Swettenham	31,815
Telok Anson Wharf	11,739
Klang	10,232
Kuala Lumpur	7,804
Ipoh... ..	5,305
Port Dickson	4,533
Tank Road	2,770

There is a falling off in tonnage ex Penang of 2,756 tons.

	Tonnage.	Receipts.	Receipt per ton.
1913 ...	1,172,794	\$3,581,005.79	\$3.05
1912 ...	988,416	3,072,270.70	3.10
Increase ...	184,378	\$ 508,735.09	Decrease \$.05

	Live stock number of head.	Receipts.	Receipt per head.
1913 ...	136,457	\$137,548.46	\$1.01
1912 ...	128,064	119,653.53	.93
Increase ...	8,393	\$ 17,894.93	\$.08

12. The earnings per mile of line open per week, exclusive of motor services, amounted to \$241.48 as compared with \$223.86.

The earnings per train mile are as follows :

	1913.	1912.
Gross earnings per train mile	\$2.83	\$2.61
Expenditure „	2.02	1.77
Net earnings „ ... ..	.81	.84

REIMBURSEMENTS.

13. A sum of \$25,063.95 was realized under this heading, being a decrease of \$23,361.26 as compared with 1912. The decrease is partly explained by a sum of \$10,199.51 having been credited to expenditure, and to refunds on account of Crown Agents' rebates on freight for the second half of 1913 having been credited in a similar manner. For details see appendix L.

WORKING EXPENSES.

14. The gross working expenses for the year, including motor services and special services on revenue account, amounted to \$6,840,677 as compared with \$5,754,671.64 in 1912, an increase of \$1,086,006.13, or 19 per cent. These figures include all expenditure incurred up to 31st December, 1913, the accounts for the year having been kept open until all expenditure vouchers were to hand, instead of charging a portion of December to the

following year's accounts as has been the practice in former years. This expenditure which under the old system would have appeared in the 1914 accounts is estimated at \$327,238, which means that the 1913 accounts include this sum in excess of the usual 12 months' expenditure. The increase is made up as follows:

Traffic Department	...	...	...	\$223,140.58	
Locomotive	„	...	...	892,131.20	
Engineering	„	...	...	139,120.74	
Stores	„	...	...	2,378.19	
Signal and Telegraph Department	...	...	...	46,308.87	\$1,303,079.58
LESS DECREASE—				{ General Management	...
				{ Motor services	...
					179,687.50
					37,385.95
					217,073.45
Net increase				...	\$1,086,006.13

15. Annually recurrent expenditure by itself shows the following results when compared with similar expenditure for 1912:

INCREASES—	{	Traffic Department	...	...	\$230,250.74	
	{	Locomotive	„	...	670,093.73	
	{	Engineering	„	...	220,057.71	
	{	Stores	„	...	2,378.19	
	{	Signal and Telegraph Dept.	...	...	40,159.61	\$1,162,939.98
DECREASES—	{	General Management	...	...	28,033.28	
	{	Motor services	...	...	37,385.95	65,419.77
NET INCREASE—(23½ per cent.) annually recurrent expenditure					...	\$1,097,520.21

In 1913 the vote “Electric Lighting” was transferred from the Telegraph to the Locomotive Department. The expenditure under this heading in 1913 being \$19,142.38 as compared with \$11,598.07 in 1912. For the purposes of comparison, the 1912 figures are included under the Locomotive Department also.

16. Expenditure under the heading special services on revenue account is less by \$11,514.08, made up as follows:

DECREASES—	{	General Management	...	...	\$151,653.68	
	{	Traffic Department	...	...	7,110.16	
	{	Engineering	„	...	80,936.97	\$239,700.81
INCREASES—	{	Locomotive Department	...	...	222,037.47	
	{	Signal and Telegraph Dept.	...	...	6,149.26	228,186.73
NET DECREASE—Special services on revenue account					...	\$ 11,514.08

17. Appendix C accompanying this report gives details of the increases and decreases under the various accounts.

The large decrease under the heading General Management is explained by a sum of \$150,000 having been paid in 1912 on account of the rent of the Singapore Line. If this is omitted the actual saving is \$29,687.50, which is explained by the Drawing Office Staff in 1913 appearing under the Engineering Department.

The department showing the largest increase under annually recurrent expenditure is the Locomotive—viz., \$670,093.73, or 38 per cent. Of this, the item fuel is responsible for \$287,413.98, an increase of 55 per cent. over the amount paid in 1912.

18. The proportion of working expenses to earnings works out to 71.36 per cent. as compared with 67.77 per cent. in 1912, but expenditure covers a period of 12½ months.

19. If we separate special services on revenue account and annually recurrent expenditure the results are:

			1913.		1912.
Annually recurrent	...	...	59.71 per cent.	...	54.37 per cent.
Special services	...	...	11.65	„	13.40
			<u>71.36</u>	„	<u>67.77</u>

WORKING RESULTS—PROFITS, ETC.

20. The dividend earned by the open lines on a capital of \$69,195,531.09 and a net profit of \$2,722,946.41 works out at 3.93 per cent. as compared with 4.35 per cent. in 1912, the expenditure however covers a period of 12½ months.

MOTOR SERVICES.

CAPITAL ACCOUNT.

21. The capital account of these services amounted to \$433,915.37 on 31st December, 1913, \$14,990 less than at the end of 1912, owing to the following sums having been credited during the year:

By sale of cars	...	...	...	...	...	...	...	\$ 6,100
„ buildings	...	...	...	...	...	...	...	8,890
							Total	\$14,990

Details of capital account are as follows:

Buildings...	...	...	...	...	...	...	...	\$ 68,723.42
Cars	...	...	...	...	...	...	...	362,672.62
Machinery	...	...	...	...	...	...	...	2,505.75
Furniture...	...	...	...	...	...	...	...	13.58
							Total	\$433,915.37

For further details see appendix P.

REVENUE.

22. The total earnings during the year amounted to \$41,525.23, for which the following sections are responsible:

Pahang services	...	...	...	...	...	...	...	\$35,857.90
Klang-Kuala Selangor	...	...	...	...	...	...	...	4,345.64
Miscellaneous	...	...	...	...	...	...	...	1,321.69
							Total	\$41,525.23

23. These figures, as compared with 1912, show a decrease of \$27,232.56, the explanation of which is as follows:

DECREASES—	{ Pahang service...	...	...	...	...	...	\$12,402.26
	{ Klang-Kuala Selangor	...	...	...	...	...	13,757.98
	{ Miscellaneous	...	...	...	...	...	1,072.32
						Total	\$27,232.56

24. This falling off is due to fewer passengers having been carried:

On the Pahang services	...	...	...	...	...	19,804 less
„ Kuala Selangor services	...	...	...	...	...	28,452 „

As regards Pahang, the motor-bus service which was running between Kuala Lipis and Bentong in 1912 was discontinued in June, 1913, and the Kuala Selangor service was stopped on the opening of the Railway to Asam Jawa on 1st September, 1913.

25. The motor-lorry service between Kuala Lumpur and Pahang viâ Bentong was only running for the five months January to May, the repairs to the road between the Gap and Raub having been completed and the ordinary service resumed there with effect from 1st June, 1913. The weight of goods carried by this lorry service during the five months amounted to 539 pikuls 68 katties, representing a revenue of \$1,171.05; this amount being supplemented by payment made by the State of Pahang to the extent of \$828.95 to bring the receipts up to \$400 per mensem, the amount guaranteed by that State.

26. The weight of other traffic carried and revenue earned were 423 pikuls 74 katties and \$1,158.42, respectively.

WORKING EXPENSES.

27. The expenditure on account of actual running expenses and repairs amounted to \$65,198.96 as compared with \$99,592.25 in 1912, but the cost per car mile increased from 48.6 cents to 53.8 cents.

28. Depreciation on cars, machinery, etc., for the year 1913, calculated on a five years' life, or 20 per cent. per annum, absorbed \$19,352.52, bringing the total working account up to \$84,551.48 (*vide* appendix R), resulting in a total cost per car mile of 69.5 cents as compared with 75.7 cents in 1912.

MILEAGE.

29. The total mileage run during the year (including 5,907 miles run by the Inspection Car) was 121,559 as compared with 186,548 in 1912, a decrease of 64,989 miles, arrived at as follows:

	Miles.
Pahang services—Decrease	37,185
Kuala Selangor services—Decrease	28,418
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	65,603
Miscellaneous mileage—Increase... ..	614
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Net Decrease	64,989
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WORKING RESULTS.

30. The result of the year's working shows a loss of \$43,026.25 as compared with a loss of \$72,390.66 in 1912, making a total loss of \$291,462.38 since the commencement.

In the balance sheet (appendix S) the value of cars is shown as \$4,546.70 as against an original cost of \$368,772.62, less \$6,100 realized by the sale of old cars, or \$362,672.62, the difference—\$358,125.92—having been transferred to a depreciation account (*vide* remarks column, appendix Q). A sum of \$1,266.43 has also been written off machinery and furniture.

GENERAL.

31. The following statistics show a comparison between the results of 1913 and 1912:

	1913.	1912.
Passengers, 1st class	2,565)	2,823)
" 3rd "	10,384)	58,382)
The car miles were	12,949 ...	186,548
Average number of automobiles running per diem	5.08 ...	7.90
" " miles per car per diem	65 ...	65
" " journeys made per diem	7.13 ...	12.51
Average receipts per automobile per diem	\$22.38 ...	\$23.77
" " journey per automobile	\$15.94 ...	\$15.03
Receipts per car mile	34.02 cts. ...	36.9 cts.
The cost of petrol consumed was	\$8,904.36 ...	\$14,901.53
" " per car mile was ... ..	.07 cts. ...	.08 cts.
The average number of miles run on one gallon petrol was	6.8 ...	6.3
The cost of running stores was	\$2,054.87 ...	\$2,367.07
" " per car mile was	1.7 cts. ...	1.3 cts.
The average cost of repairs and renewal per car was	\$1,929.44 ...	\$1,378.03
" " per car mile was	26.1 cts. ...	21.4 cts.
Total working expenses per mile was	53.8 " ...	48.7 "
Depreciation per car mile	15.9 " ...	27.1 "
Percentage of working expenses (including depreciation) to receipt was	204 per cent. ...	205 per cent.
Percentage of working expenses (excluding depreciation) to receipt was	157 per cent. ...	132 per cent.

TRAIN MILEAGE.

32. The train mileage for the year totalled 3,351,405 miles as compared with 3,194,200 in 1912, an increase of 156,845 miles. The figure for 1913 for the first time excludes ballast train mileage, the cost of running and repairs to same now being borne by the Ways and Works Department instead of the Locomotive Department. The increase in ordinary revenue mileage amounted to 452,317 miles.

	1913.	1912.
Ordinary	3,272,401 ...	2,803,161
Special	41,533 ...	58,456
Non-paying	37,111 ...	332,583
	<hr/>	<hr/>
Total	3,351,045 ...	3,194,200
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33. Departmental expenditure per train mile shows the following results :

	1913.	1912.
General Management	08 cents	14 cents
Traffic Department	40 „	35 „
Locomotive „	86 „	63 „
Engineering „	61 „	60 „
Stores „	01 „	01 „
Telegraph „	06 „	04 „
	<u>2.02</u>	<u>1.77</u>

34. The total number of passengers carried during the year was 13,143,659 against 11,589,273 in 1912, an increase of 1,554,386.

35. The following is the distribution of classes for the last five years :

—	1909.	1910.	1911.	1912.	1913.
First class	122,673	152,297	165,210	243,055	286,555
Second „	389,183	492,263	633,347	1,091,346	1,607,207
Third „	6,750,974	8,389,969	9,549,339	10,254,872	11,249,897
Total number of passengers carried	7,262,830	9,034,529	10,347,896	11,589,273	13,143,659

36. Comparison of coaching and goods, 1913 and 1912 :

	1913.	1912.	Increase.
Goods carried in tons ...	1,172,794	988,416	184,378
Passengers carried... ..	13,143,659	11,589,273	1,554,386
Live stock (heads)... ..	136,457	128,604	7,853

37. These figures do not include season ticket holders, passengers excessed on trains, workmen and scholars travelling on reduced fare tickets or free pass holders.

38. There was an increase in the goods and mineral traffic received at, and forwarded by rail from, Telok Anson and Port Swettenham. The following comparison shows traffic during the last 10 years :

Date.	Goods traffic received by rail and shipped from		Goods traffic forwarded by rail from	
	Telok Anson. Tons.	Port Swettenham. Tons.	Telok Anson. Tons.	Port Swettenham. Tons.
1904 ...	34,159	28,603	92,491	115,178
1905 ...	32,965	27,970	97,245	128,895
1906 ...	31,482	28,802	105,759	147,524
1907 ...	32,904	31,068	114,858	160,318
1908 ...	35,432	34,934	102,740	155,611
1909 ...	32,888	32,698	89,065	161,118
1910 ...	31,770	32,678	99,398	174,659
1911 ...	32,487	37,570	109,159	207,894
1912 ...	34,947	44,569	125,654	219,037
1913 ...	42,955	53,795	137,393	250,852

39. The following is the comparison of the goods traffic dealt with at Penang and Prai during the same period, exclusive of departmental traffic carried free :

Date.	Goods traffic received by rail and shipped from Prai.		Goods traffic received at Penang and shipped to Prai.	
	Tons.	Tons.	Tons.	Tons.
1904 ...	596	2,089	...	...
1905 ...	1,454	2,089	...	...
1906 ...	2,762	16,590	...	...
1907 ...	2,723	51,424	...	...
1908 ...	4,501	48,532	...	...
1909 ...	2,781	65,965	...	...
1910 ...	2,117	59,142	...	...
1911 ...	2,624	50,890	25,177	7,292
1912 ...	3,004	56,640	31,038	9,431
1913 ...	5,080	98,411	28,282	9,095

NOTE.—Prior to 1911 no register was kept for tonnage received at Penang.

40. The new tongkang wharf at Sungei Aur, Port Swettenham, was opened on 1st March, 1913.

41. During 1913, 140 ocean steamers called at Port Swettenham with import cargo as against 115 during 1912, and 53 ocean steamers for export cargo as against 51 during 1912. These figures do not include the British India Steamers which run regularly between Indian Ports and Singapore, calling at Port Swettenham.

42. The ocean steamers calling at Port Swettenham included the following:

	Calling with import cargo.	Calling for export cargo.
P. & O....	34	26
Alfred Holt's Blue Funnel	39	27
Ben Line	26	
Glen „	15	
Shire „	12	
Miscellaneous	14	
Total	140	53

43. There were two meetings held by the Advisory Board during the year when questions affecting the port were discussed, and on another occasion the Board visited Port Swettenham.

The working at Port Swettenham was carried on in a thoroughly satisfactory manner and a great improvement effected, the Traffic Manager attributes this to the excellent work done by the local officer in charge, to the provision of more tongkangs and opening of new wharf at Sungei Aur. The employment of a regular staff of Chinese tally clerks has been a success.

44. The wagon ferry between Johore Bahru and Woodlands has worked exceedingly well during the year, and the following figures show a very considerable increase in the number of vehicles dealt with:

	1911.	1912.	1913.
Loaded wagons forwarded to Singapore...	1,463	2,606	3,890
Empty „ „	3,515	6,797	9,742
Loaded wagons received from „	4,809	9,290	13,088
Empty „ „	144	230	205
Total number of trips	1,541	2,993	4,610

45. An enquiry office at Johnston's Pier, Singapore, was opened on 26th May, 1913.

46. The mail car and motor-lorry service between Kuala Lumpur, Bentong and Kuala Lipis were withdrawn on 1st June, 1913, and a service reopened between Kuala Kubu, Raub and Kuala Lipis on 1st and 2nd June, 1913.

47. The deviation of line via Port Swettenham Junction was opened on 1st September, 1913, and on the same date the section of line between Sultan Street and Kuala Lumpur Central Station was closed and a branch service of trains was started between Sultan Street and Sungei Besi. The marshalling sidings at Kuala Lumpur were opened at the same time and these have greatly relieved the congestion in Kuala Lumpur goods yard.

48. A sanatorium for the use of the subordinate members of the Railway Department was opened at Port Dickson on 1st November, 1913.

49. Twelve thousand eight hundred and ninety-two tons of rubber were exported through Port Swettenham against 9,606 tons during 1912, and 5,995 tons in 1911.

50. A sum of \$10,929.93 was paid on account of claims, of which sum \$3,349.14 was recovered.

51. Rents for hotels, restaurants, restaurant cars and food stalls realized \$35,376.45 against \$31,257.50 in 1912, and \$22,582.74 in 1911.

52. There were 212 prosecutions undertaken by the Traffic Department during the year, resulting in 190 convictions with fines amounting to \$1,295.

The principal offences were:

Theft	47
Assault	37
Trespass	30
Cattle trespass	11
Travelling without ticket	21
Entering or leaving trains in motion	17

At the close of the year there were 165 stations and 9 passenger halts open for traffic.

ACCIDENTS.

53. There were 34 fatal accidents during 1913. In 13 cases Railway servants were killed, and the remaining 21 were mostly trespassers. Inquests were held except in five cases, where the Magistrate did not consider it necessary. The 34 persons killed were of the following nationalities :

								Railway servants.		Others.
Chinese	...	...	...	...	...	...	...	1	...	12
Tamils	...	...	...	...	...	...	...	12	...	7
Malays	...	...	...	...	...	...	...	...	...	2
								13	...	21

54. There were 54 cases of personal injury, in 34 cases Railway servants on duty were injured, and the remaining 20 cases were accounted for by the injury of 10 passengers and 10 trespassers.

A Tamil third class passenger travelling from Kampar jumped out at Klang North on 10th February, 1913, before the train came to a stand, and fell between the rails and platform, and was severely injured.

A Public Works Department cooly working on Cluny Road Bridge missed his footing, fell and was injured.

55. There were 182 derailments during the year. Of these, only 11 occurred outside station limits; all were duly enquired into.

56. There were 13 cases where level-crossing gates were run into and damaged by trains and five cases of damage to gates by motor cars. All were duly enquired into and those at fault suitably dealt with.

57. On 2nd January, 1913, No. 311 Down passenger train, Johore Bahru to Tank Road, collided with a light engine at telegraph post 476/1, between Woodlands and Mandai. Fireman Muttiah of No. 311 Down was killed on the spot. Driver Rayney and Fireman Narayanasamy of the light engine were seriously injured. Narayanasamy succumbed to his injuries on 5th January. The cause of the collision was that No. 311 Down passenger train ran without staff or ticket or line clear authority. Station Master (Ganapathy Pillai) absconded soon after the collision and has not been traced.

58. On 23rd August, No. 102 Up mixed train, Kuala Lumpur to Kuala Kubu, collided with No. 39 Down goods, Ipoh to Kuala Lumpur, at Kuang Station. No persons were injured but considerable damage was done to engines, coaches and goods vehicles. A joint enquiry was held and Driver Heyzer of No. 102 Up was found to blame and his services were dispensed with.

RAILWAY POLICE.

59. STRENGTH.—The approved strength of the Force on the 1st January, 1913, was :

- 4 Sergeants ;
- 4 Corporals ;
- 136 Constables (I) ;
- 315 Constables (II) ;
- 4 Detectives ;
- 1 Chief Inspector ;
- 2 European Inspectors.

The actual strength on 31st December, 1913, was :

- 4 Sergeants ;
- 1 Corporal ;
- 24 Constables (I) ;
- 389 Constables (II) ;
- 3 Detectives ;
- 1 Chief Inspector ;
- 1 European Inspector.

ENLISTMENT.—Up to 26th November, 1913, there were enlisted a total of 510 men. Of this number 272 were recruits.

60. CASUALTIES.—Under this heading from the following causes there were struck off the strength of the Force during the year under review :

By death	...	...	...	...	...	...	...	...	1
„ dismissal	...	...	...	...	...	...	...	...	9
„ discharge	...	...	...	...	...	...	...	...	20
„ resignation	...	...	...	...	...	...	...	...	23

the latter number was made up by the number of men refusing to come under the scheme or unsuitable to recruit.

61. **DISCIPLINE.**—The discipline of the Force is reported to have notably improved during the year under review, due to the fact that the punishment awarded has been more severe than formerly, and it would seem to have a deterrent effect. The total number of offences was 90.

62. **DETECTIVES.**—This branch was not brought up to full strength during the year under review; this was entirely due to the fact that the Chief Inspector was practically single handed and could not satisfactorily control their movements; however the men employed performed their duties on the whole fairly well and carried out their orders. It is necessary that these men should always work under the control of an European Officer; it is by no means easy to secure the services of good men, this is because of their not being ensured steady employment under the regulations.

63. **PROSECUTIONS.**—There were very few prosecutions taken up directly by this department during the year under review, and nearly all were by direction of the Traffic Manager.

64. **ARMS AND AMMUNITIONS.**—During the period under review 230 twelve-bore guns and 3,000 rounds of ammunition were received from the Crown Agents, these will be issued and all obsolete guns and ammunition withdrawn, this is receiving attention, all the old guns sent to the police armoury have been condemned and will be destroyed, very few of the old pattern will likely be found to be serviceable and in some cases it is impossible to obtain a fresh supply of ammunition for them even if found serviceable.

ENGINEERING.

(OPEN LINES, WAYS AND WORKS.)

65. The following renewals were made: 241 rails, 110,048 sleepers, 15 points and 59 crossings, 78,792½ cubic yards of ballast were supplied, and 96,541 cubic yards of earth for cessing deposited at banks.

66. **LEVEL CROSSINGS.**—All level crossings were maintained in good order. Three new level crossings and nine occupation crossings were provided.

67. **FENCING.**—Two thousand eight hundred and eighty-eight lineal yards of fencing were erected.

68. **CURRENT REPAIRS TO BUILDINGS AND WHARVES.**—A sum of \$79,502.90 was expended in this connection.

69. **MINOR WORKS.**—The expenditure during the year on this account was \$18,180.01.

70. **BRIDGES AND CULVERTS.**—All bridges and culverts were kept in thorough repair; 54 longitudinal timbers on bridges were renewed; 30 new bed timbers were put in; 127 bridges were cleaned and painted.

71. **SLIPS AND FLOODS.**—There were several land slips and washaways on various parts of the line, but those which occurred on the Johore section on 9th January, 13th March, 18th March and 13th May, 1913, were the most troublesome, causing dislocation of the traffic and necessitating transfer of passengers and luggage. There were several floods between Seremban and Membau on the Port Dickson Line, necessitating suspension of traffic until the floods subsided.

72. **MAINTENANCE.**—The cost of maintenance per mile of line open per week of the Federated Malay States Railways was \$35.91 as compared with \$33.81 in 1912. The expenditure on slips and washaways was \$77,062.56. Appendix V details the expenditure to different heads. The 771 miles of permanent way, together with the 102 miles 75 chains of loop line and sidings, were maintained in good running order.

73. The principal works carried out under revenue and capital accounts were as follows:

REVENUE ACCOUNT.

New Station, Kuala Kubu;
Re-railing portion of Telok Anson Branch;
New Station, Goods Shed and Alterations to Yard Signalling, Batu Tiga;
New Verandah Covering to Platform, Klang;
New Passenger and Goods Station, Labu Village;
Quarters for Assistant Station Master, Tampin;
Rebuilding Stations, Singapore Railway.

CAPITAL ACCOUNT.

New Station and Hotel, Ipoh;
Quarters for Guards and Ticket Collectors, etc., Ipoh;
New Station and Platform, Malim Nawar;
Remodelling Station Yard, Loop Siding, etc., Tapah Road;
Married Clerks' Quarters, 30 Units, Central Workshops;
New Wharf Accommodation, Port Swettenham.

SLEEPER DEPÔT.

74. The following is a comparative statement of sleepers purchased during 1912 and 1913:

Description.						1912.	1913.
First class	...	...	...	...	...	206,751	271,587
Second „	...	...	...	...	...	26,725	29,919
Third „	...	...	...	...	...	7,758	3,341
Total						241,234	304,847

The cost during 1913 was \$496,948.87.

The total number of sleepers of all classes dealt with during the year were as follows:

In stock on 1st January, 1913	...	...	...	...	...	145,272
Purchased during 1913	...	...	...	...	...	304,847
Total						450,119

Sleepers sold during the year were 286,072, made up as under:

Description.			Open line.	Construction.	Total.
First class	...	...	94,993	148,802	243,795
Second „	...	...	35,026	1,798	36,824
Third „	...	...	4,818	635	5,453

The balance on hand on 31st December, 1913, is 164,047 sleepers.

LOCOMOTIVE AND ROLLING STOCK.

75. All locomotives, carriages, wagons, motor cars, steam boats, tongkangs, machinery, weighbridges, turntables and other plant were maintained in an efficient state during the year.

LOCOMOTIVES.

76. Twenty-two new locomotives arrived during the year and were added to the stock—viz., seven “H” class tender engines and five “I” class tank engines for the Tembeling-Kota Bharu Railway, two “H” class tender engines for the Kedah Railway, and five “H” class tender engines and three “I” class tank engines for open line. The new “I” class tank engines are 3 tons 4 cwts. heavier than the engines of this class obtained in 1908 and 1912, the total weight of this engine in steam being 44 tons 19 cwts. Four hundred gallons increase in water capacity accounts for the major portion of this increased weight and the engines are thus rendered more suitable for work on passenger and goods trains.

77. One small tank engine “A” class, No. 6, was transferred to the Construction Department.

78. Five “E” class second-hand locomotives were purchased from the Burma Railway for the Construction Department. The cost of these five locomotives is \$19,481.20 or \$3,896.24 each in running order at Central Workshops.

Eight “O” class second-hand locomotives were purchased from the Burma Railway, four for Construction Department and four for open line, at a cost of \$58,004.08 or \$7,250.51 each in running order at Central Workshops.

79. The open line stock of locomotives was 153 on 31st December, 1913, against 128 on 31st December, 1912. Full details are given in appendix Z.

80. Fifty-nine engines of all classes passed through the Central Workshops for heavy and light repairs during the year as compared with 42 during 1912. Of these 59, 54 were paid for by revenue and five by construction votes. The cost per engine against revenue was \$6,186.03 as against \$6,411.93 in 1912, and the cost per engine mile was 8.60 cents in 1913 against 6.87 cents in 1912.

81. Of the 59 engines which passed through the shops, 32 were for heavy repairs against 22 in 1912.

Statement of locomotives repaired. Percentage to total stock:

Year.	Heavy.	Medium.	Light.	Total.	Total stock.	Percentage repaired.
1912	22	5	15	42	128*	32.81
1913	32	6	21	59	169*	34.91

82. The total engine mileage was 3,885,277 compared with 3,639,137 in 1912, an increase of 246,140 miles, or 6.76 per cent. The maintenance ballast miles of 374,322 which were previously included with the engine and train miles have now been excluded for 1913 owing to the fact that part of the expenditure of running the ballast trains has been credited to certain votes of the Locomotive Department for 1913.

* Includes Construction Department locomotives.

83. The increase in engine miles was due to the introduction of additional passenger goods and special trains owing to the rapid increase of traffic.

84. The average daily miles per engine taken on the 153 locomotives was 69.57 compared with 77.68 for 128 engines in 1912. The average daily mileage for engines actually at work was 109.49 against 98.36 in 1912.

85. FUEL.—The consumption of engine fuel was: bakau 64,019 tons and coal 68,928 tons, and the cost per engine mile was 20.73 cents as against 14.23 cents in 1912, the figures per train mile being 24.03 and 16.21 cents, respectively.

86. The consumption of the "Banksimula" Indian coal used in 1913 was 7,342 tons, and the consumption of the "Fushum" Manchurian coal was 60,166 tons, and the Australian coal was 1,420 tons. Adding the total Indian, Manchurian and Australian coals, the consumption per train mile was 66.87 lbs. as against 50.87 lbs. in 1912.

87. The increased cost of fuel is primarily due to the heavy increase in price of coal from \$7.51 to \$8.95 at Prai, and from \$7.62 to \$8.75 at Singapore. The ballast miles, 374,322, for 1913 have been excluded on the grounds that the Engineering Department have credited the Locomotive Department with the cost of working ballast engines at the rate of \$1.42 per hour, but in arriving at that figure coal was only priced at the 1912 rate—viz., \$7.51 per ton. The increase in consumption per train mile is due to the increased use of larger engines and heavier trains.

88. STEAM CRANES.—Two 10-ton travelling hand cranes, one 5-ton and one 20-ton steam breakdown cranes were received from England and erected during the year. Two second-hand 4-ton steam cranes were purchased from the Tanjong Pagar Dock Board and another 2-ton steam crane from Johore Bahru was repaired; and these were placed for use at Central Workshops Yard.

BOGIE PASSENGER STOCK.

89. Four first class and four second coaches were built in England and erected at Central Workshops during the year.

90. Eight third class, eight third and brake composites, and one postal sorting van bodies of the new mail type were built in the Central Workshops and mounted on the frames and bogies sent out from England during the year.

91. One bogie third and brake van has been altered into bogie mail van for the use of Postmaster-General, Straits Settlements, for conveyance of weekly English Mails from Penang to Singapore.

92. One bogie third class was condemned, one bogie first and third composite was converted into bogie full third class, and one bogie second and third composite converted into full second class to seat 52 passengers.

93. Four bogie coaches have been fitted with the "Stones System" of electric lighting during the year.

94. The total stock of bogie passenger coaches on the 31st December, 1913, was 298 as compared with 274 in 1912.

95. The following four-wheeled coaches were condemned during the year:

- 2 Third class carriages;
- 1 First and second composite;
- 2 Brake vans.

96. Two four-wheeled third class coaches were converted into third and van.

97. Two new four-wheeled inspection coach bodies were built in the Central Workshops and mounted on the old steel frames for the Construction Department.

98. The total stock of four-wheeled passenger coaches on 31st December, 1913, was 65 as compared with 66 in 1912.

99. Two hundred and forty-two passenger coaches passed through the shops for heavy and light repairs as compared with 203 in 1912, at an average cost of \$775.63 per vehicle, as compared with \$667.11 in 1912. The cost per train mile was 5.60 cents against 4.24 cents in 1912.

100. Of the 242 coaches which passed through the shops, 217 were heavy repairs against 175 in 1912.

Statement of coaches repaired. Percentage to total stock:

Year.			Heavy.	Light.	Total.	Total stock.	Percentage repaired.
1912	...	...	175	28	203	340	59.7
1913	...	...	217	25	242	363	66.7

BOGIE GOODS WAGONS.

101. Two new locomotive tool van bodies were built in the Central Workshops and mounted on the old steel frames. These vans will be stationed in Kuala Lumpur and Ipoh for use in case of a breakdown, etc., on the line.

102. The total stock of bogie goods wagons on 31st December, 1913, was 111 as compared with 109 in 1912.

FOUR-WHEELED GOODS STOCK.

103. One hundred and eighty-four steel covered goods, 150 steel low-sides, 44 steel high-sides and 25 wooden cattle wagons were procured and erected during the year, and many more were in process of erection at the close of the year. All these vehicles are on 2' 9 $\frac{1}{2}$ " diameter wheels of 10-ton capacity with the exception of steel high-sides, which are of 12-ton capacity.

104. The bodies of 25 cattle wagons, 50 timber trucks, 12 fish vans and 24 goods brake vans were built in the Central Workshops and mounted on the frames sent out from England during the year. Most of these vehicles are on 2' 9 $\frac{1}{2}$ " diameter wheels and are of 10-ton capacity.

105. Sixteen covered goods and two high-sided wagons were condemned during the year. These vehicles will be replaced with new stock in 1914.

106. Two 8-ton low-sided wagons were converted into high-sided wagons. Two 10-ton low-sided wagons were converted into tank wagons and three open carriage trucks have been altered into crane runners during the year.

107. The total stock of four-wheeled goods wagons on 31st December, 1913, was 3,178 as compared with 2,951 in 1912. Full details are given in appendix Z.

108. Eight hundred and eighty-six wagons passed through the Central Workshops for heavy and light repairs during the year as compared with 1,027 in 1912. Of the 886 wagons, 834 were paid for by revenue and 52 by construction votes. The average cost per vehicle against revenue was \$145.07 as against \$98.44 in 1912, and the cost per train mile was 3.61 cents in 1913 against 3.00 cents in 1912.

109. Of the 886 wagons which passed through the shops, 608 were for heavy repairs against 553 in 1912.

110. During the year, 11 goods vehicles were reconstructed at a cost of \$1,793.26, and paid from special services, revenue account.

111. The 52 wagons which were repaired in shops were paid for by the following votes of the Construction Department during the year:

Number of wagons.	Cost.	Vote.
18 ...	\$2,134.76 ...	Semantan-Kuala Tembeling Railway.
17 ...	986.99 ...	Padang Java-Kuala Selangor Railway.
8 ...	469.20 ...	Kedah Railway Extension.
1 ...	116.37 ...	Pudu to Ampang.
8 ...	482.07 ...	Through Main Line, Kuala Lumpur to Salak South.

Statement of bogie and four-wheeled goods wagons repaired. Percentage to total stock:

Year.	Heavy.	Light.	Total.	Total Stock.	Percentage repaired.
1912 ...	553 ...	474 ...	1,027 ...	3,067 *	33.48
1913 ...	608 ...	278 ...	886 ...	3,608 *	24.56

STEAM BOATS AND TONGKANGS.

112. There was no addition to the fleet of steamers during the year. Two second-hand wooden tongkangs were taken over from the Construction Department and six steel tongkangs were built at Tanjong Pagar Dock Board, and were put to work at Port Swettenham during the year.

113. Four wooden tongkangs sunk at Port Swettenham and two wooden and two steel tongkangs were broken up in 1913.

114. The fleet of ferry boats and tongkangs on 31st December, 1913, was the same as 1912—*viz.*, eight ferry boats and 59 tongkangs.

115. The mileage of ferry boats plying between Penang and Prai, and Johore Bahru and Woodlands was 51,290 compared with 48,881 in 1912, and the cost per mile was \$2.30 against \$2.05 in 1912, the mileage of ferry boats at Port Swettenham not being reckoned, but all were maintained from the same provision.

* Includes Construction Department wagons.

116. The increased cost for 1913 is due to the fact that launches "Perak" and "Penang" were docked twice, and "Ibrahim" docked thrice during the year, also "Singapore" was docked in March, and "Kinta" was docked in September, 1913. The repairs to tongkangs at Port Swettenham have also been very heavy, and prices charged by Tanjong Pagar Dock Board were abnormal.

117. The two wagon ferries running between Johore Bahru and Woodlands were maintained in good order during the year.

118. The wagon ferry travellers at Johore Bahru and Woodlands have been in constant use daily, and are in good order.

119. The total mileage of wagon ferries during the year was 8,371 compared with 5,964 in 1912, an increase of 2,407 miles, or 40.36 per cent.

120. The expenditure incurred in maintaining the traveller and the ferry boats during the year was \$28,195.64 against \$29,624.94 in 1912, and the cost per mile was \$3.37 against \$4.97 in 1912.

LAUNCH SERVICE BETWEEN KUALA KRAU AND PEKAN.

121. One new steam launch was added to the fleet during the year—viz., the "Sah," for the Pahang river launch services. This launch was built in Singapore by the Singapore Harbour Board and put to work in April, 1913. The fleet of launches in Pahang river on 31st December, 1913, was two—viz., motor launch "Tungku-Meriam" and steam launch "Sah."

122. The mileage of the two launches during the year was 12,107 against 6,450 miles for one launch in 1912, and the expenditure incurred in maintaining the two launches was \$16,632.38 against \$8176.85 for one launch in 1912, and the cost per mile was \$1.37 in 1913 against \$1.27 for one launch in 1912.

123. During the year the motor launch "Tungku-Meriam" underwent thorough overhaul, and steam launch "Sah" was docked in the month of December, 1913, for survey and repairs.

POWER.

124. On the 1st of October, 1912, all electrical engineering apart from telegraphy and telephony was handed over to the Locomotive Department, and it was found necessary to carry out many repairs and alterations on the wiring installations to eliminate the leakage of electricity that was taking place. This, along with an examination of the meters, was sufficient to bring about a substantial reduction in the monthly bills for electricity supplied to Kuala Lumpur station and hotel.

125. The following new work was carried out departmentally during the year:

Railway Reading Room, Kuala Lumpur;
Recreation Club, Port Swettenham;
Marshalling Yards, Signal Cabins and Yard Foreman's Office;
Old Printing Office.

The above works clearly proved that the department were able to wire and install lights and fans cheaper and much more satisfactory than local contractors.

126. The electric plant at Central Workshops continued to give satisfaction. The current supplied by the Selangor Government electric lighting water-power plant at Gombak was again satisfactory.

127. The total Board of Trade units recorded during the years 1912 and 1913 are as follows:

Stations.	1912.	1913.
Power received from Gombak	169,700	197,100
Power generated by Central Workshops plant ...	10,674	19,042
Total ...	180,374	216,142

an increase of 35,768 B.T. units over 1912.

128. The table appended below shows the rapid yearly rise in the horse-power of the motors installed:

Year.	Number of motors.	Horse-power.
1906	43	372
1907	49	431
1908	63	561
1909	68	564
1910	74	618
1911	87	707
1912	92	769 $\frac{1}{2}$
1913	96	830 $\frac{1}{2}$

129. The statement given below shows the carriages fitted with electric light and which are running satisfactorily:

1909.	1910.	1911.	1912.	1913.	Total.
2	—	11	13	4	30

130. The following is a statement of units consumed at different depôts and amount paid by Railway during 1913:

Place.	Number of units.	Cost.	How paid.
Railway Offices and Jetty, Penang	3,855	\$1,156.50	\$400.50 recovered from tenants and the balance paid by the Railway
Kuala Lumpur Station Hotel	15,074	1,507.40	By hotel lessee
Kuala Lumpur Station Lift	125	12.50	"
Kuala Lumpur Station	7,425	742.50	Paid by Railway
Kuala Lumpur Offices, Goods Yard, Printing and Telegraph Motor	17,287	1,728.70	"
Running Shed, including Yard and Motor in Workshops	19,870	1,987.00	"
Marshalling Yard	12,218	1,221.80	"
Sultan Street Station	699	69.90	"
Central Workshops	197,100	19,710.00	\$488.20 recovered from tenants; rest paid by Railway
Total	273,653	\$28,136.30	

131. Five Railway motor cars passed through the Central Workshops for general repairs during the year compared with 13 in 1912. In addition to the above, six motor cars belonging to Government officers passed through the shops for heavy and light repairs during the year as compared with 20 in 1912.

132. Appendix W gives full details of expenditure on engines, carriages, wagons and running on revenue account, but exclusive of steam boats, tongkangs, motor-launch service Pekan-Kuala Krau, ferry barge service and motor service. From this it will be seen that the Locomotive Department spent \$2,255,488.44 as compared with \$1,599,401.92 in 1912, an increase of \$656,486.52, or a percentage of 41.05. The cost per train mile was 67.32 cents as against 50.07 cents in 1912, an increase of 34.45 per cent. over the previous year, the proportion chargeable to sub-heads being as follows:

Sub-heads.	1913. cts.	1912. cts.	1911. cts.	1910. cts.	1909. cts.
Engines...	48.7	33.9	32.3	31.6	32.5
Carriages	11.3	9.1	8.0	8.8	8.2
Wagons...	3.6	3.0	3.4	4.0	3.2
General...	6.7	4.0	4.8	4.1	3.8
Total	67.3	50.0	48.5	48.5	47.7

This is exclusive of a sum of \$476,324.98 spent on special services, revenue account.

If this sum is included the expenditure per train mile works out at 81.53 cents in 1913 against 58.03 cents in 1912, an increase of 40.50 per cent. over the previous year.

TELEGRAPH DEPARTMENT.

133. The total mileage of railway wires is 2,099 miles 16 chains, an increase of 199 miles 56 chains on the previous year.

134. Twenty-five new telegraph offices were opened during the year, making the total number at the end of the year 150.

135. Learners' instruments were installed at various centres to train the traffic staff in telegraphy.

136. Thirteen telephones were erected and connected to the Railway exchange at Kuala Lumpur. At Ipoh the Chief Permanent Way Inspector's house was fitted with a telephone. Seventy-five miles sixty chains of telegraph was constructed for the Post and Telegraph Department during the year. The total mileage now stands at 2,358 miles 60 chains.

137. Temporary cabins were erected, and the signalling and the interlocking of the Kuala Lumpur deviation completed and brought into use on 1st September, 1913.

138. On the same date the new signal cabin and interlocking at Salak South Junction, controlling Sultan Street-Sungei Besi Branch, was brought into use.

139. The interlocking at Connaught Bridge Junction is nearing completion and shortly will be brought into use.

140. A standard system of signalling wayside stations and junctions was adopted. The first station so signalled and brought into use was Tiroi on 1st October.

141. At Batu Tiga the same type of signalling is being installed and shortly will be completed.

142. Eleven wayside stations were interlocked during the year with tablet ground frames and facing point locks.

143. Six sets of gates were signalled and interlocked.

144. Six sets of gates were signalled and fitted with temporary pull-over levers pending the arrival of the standard interlocking ground frames.

145. Ninety-one renewals of signal posts were made—*viz.* :

71 Distant signals ;

20 Platform signals.

146. Thirty-six signals were shifted to fresh positions.

147. Seventy-eight distant signal lever frame timbers were renewed.

148. Fourteen white painted sign-boards were made and fixed at different places to attract drivers' attention to signal posts in cuttings.

149. Thirty-two additional stations were installed with Tyer's tablet instruments and brought into use at various periods during the year.

150. Tablet working is in use throughout the Railways, excepting only the following sections :

Tampin-Gemas ;

Gemas-Johore Bahru ;

Gemas-Tembeling ;

Taiping-Port Weld.

Provision has been made for the sections Tampin-Gemas and Gemas-Johore Bahru, and the instruments are expected out shortly, when they will be installed and brought into use as soon as possible.

151. The paucity of traffic on sections Gemas-Tembeling and Taiping-Port Weld does not justify the expenditure for tablet instruments at present.

152. During the year the tablet failures for the whole of the system total 128. The nature of the faults were as follows :

Instruments defects	...	...	...	...	...	...	...	21
Tablets jamming	...	...	...	...	...	...	...	15
Batteries	...	...	...	...	...	...	...	7
Bad earth connection	...	...	...	...	...	...	...	2
Causes unknown	...	...	...	...	...	...	...	4
No tablet in instruments	...	...	...	...	...	...	...	5
Bad working by operating staff	...	...	...	...	...	...	...	25
Line faults (caused by falling trees, lightning, jungle fires, etc.)	...	...	...	...	...	...	...	49
Total	...	...	...	...	...	...	...	128

153. The signals throughout the Railways were overhauled and painted. Interlocking frames were inspected and kept in repair, and large number of timber frames were renewed.

STORES.

154. During the year under review, stores and materials were purchased to the value of \$2,831,001.40, of which \$2,206,489.48 was paid through Crown Agents for the Colonies, being an increase of \$1,042,482.58 over the year 1912.

155. The value of stores and materials issued to the various departments amounted to \$2,520,703.08, an increase of \$753,874.16.

156. The value of stores on hand on 31st December, 1913, was \$819,684.47, an increase of \$413,338.97.

157. Indents to the number of 242 and of the estimated value of \$4,635,903.59 were despatched to the Crown Agents as compared with 216 indents of the value of \$3,393,455.47 forwarded in 1912.

158. The Stores Department executed 9,386 indents received from the different departments of the Railway as compared with 8,806 indents in 1912.

159. There were 919 shipment of stores and materials received from the Crown Agents during the year amounting to 13,581 tons, as compared with 591 consignments and 7,996 tons in 1912.

STORES ADVANCE ACCOUNT.

160. The purchases made during the year amounted to \$1,357,117.61 and the sales to \$929,138.28; the value of stock on hand on 31st December, 1913, was \$948,375.14. Appendix U accompanying this report gives details of the working account and the balance sheet for the year 1913.

CONSTRUCTION STORES.

161. During the year, stores and materials for the Railway construction were purchased to the value of \$4,071,686.33, of which \$3,123,146.05 was paid through the Crown Agents. The value of stores in hand at the close of the year being \$161,699.75. Indents to the number of 126 and the estimated value of \$3,015,391.03 were despatched to the Crown Agents.

STATISTICAL RÉSUMÉ.

162. (i) Length of lines open to traffic, including leased lines, on the 31st December, 1913, was 771 miles, being an increase of 36 miles 65 chains over 1912.

(ii) The capital account, open lines, stood at \$69,195,531.09 on the 31st December, 1913, being an increase of \$10,185,407.62 over the previous year.

(iii) Capital outlay per mile of line open averaged \$106,415.78.

(iv) The total Railway earnings amounted to \$9,506,848.77, an increase of \$1,154,589.69 over 1912.

(v) The Railway working expenses amounted to \$6,783,902.36, an increase of \$1,123,392.08 over 1912, but the 1913 expenditure covers a period of 12½ months as against 12 months for 1912.

(vi) The net profit for the year was \$2,722,946.41, equivalent to a dividend of 3.93 per cent. on a capital outlay of \$69,195,531.09.

(vii) The number of stations open for traffic were:

Permanent stations	...	...	...	...	...	...	165
Flag stations	...	...	...	...	...	...	9
Total	...	...	...	...	...	...	174

against 151 permanent stations and 10 flag stations in 1912.

(viii) The proportion of working expenses to gross earnings was 71.36 per cent. as compared with 67.76 per cent. in the previous year.

(ix) The train mileage was 3,351,045, being an increase of 156,845 over the previous year.

(x) Total earnings and working expenditure per mile of line open per week were \$241.48 and \$172.31, respectively.

(xi) Gross earnings per train mile	\$2.83
Working expenses per train mile	2.02

Net earnings	...	\$.81
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as compared with 84 cents net earnings per train mile in 1912.

(xii) Passengers carried, 13,143,659, being 1,554,386 in excess of the previous year.

(xiii) Goods and minerals carried, 1,172,794 tons and 136,457 head of live stock, being an increase of 184,378 tons and 7,853 head, respectively, over the previous year.

(xiv) Paid out on account of claims, \$10,929.93.

(xv) Prosecutions, 212.

(xvi) Cost of maintenance of way per mile per week, \$35.91.

(xvii) Sleeper renewals, exclusive of relaying, 110,048.

(xviii) Daily engine mileage, actually at work, 109.49.

(xix) Cost of locomotive, carriages and wagon departments per engine mile was 58.06 cents and per train mile 67.32 cents.

- (xx) Additional engines supplied, 25.
- (xxi) Additional bogie coaches, 24.
- (xxii) Goods vehicles, 229.
- (xxiii) Coaches repaired, 242.
- (xxiv) Goods vehicles repaired, 886.
- (xxv) Number of engines, 153.
- (xxvi) Number of bogie passenger coaches, 298.
- (xxvii) Number of four-wheeled carriages, 65.
- (xxviii) Number of goods vehicles, 3,289.
- (xxix) New telegraph stations opened, 25.
- (xxx) Length of Railway telegraph, telephone and bell wires, 2,099 miles 16 chains.
- (xxxi) Length of post and telegraph wires on Railway poles, 2,358 miles 60 chains.
- (xxxii) Value of stores purchased, open line, \$2,831,001.40.
- (xxxiii) Value of stores sold, open line, \$2,520,703.08.
- (xxxiv) Value of stores purchased for construction, \$4,071,686.33.

163. During the year there were 2,181 station audits held, of which 1,560 were regular audits and 621 in the nature of surprise visits.

164. The total number of tickets printed and issued by the Railway Printing Office during the year was 13,843,750.

The percentage of tickets to class was:

First class	...	...	364,700	...	2.64 per cent.
Second „	...	...	1,780,875	...	12.87 „
Third „	...	...	11,632,525	...	84.02 „
Bicycles	...	...	59,750	...	.43 „
Motor cycles	...	...	5,900	...	.04 „

CONSTRUCTION.

165. The total expenditure during the year 1913 on construction and surveys of new lines in the Federated Malay States amounted to \$7,405,686.04 as compared with \$4,534,948.02 during 1912, made up as follows:

Semantan to Kuala Tembeling Railway	...	...	\$ 115,624.49
Padang Java to Kuala Selangor Railway	...	...	337,087.20
East Coast Railway, Kelantan Section	...	...	2,460,588.97
„ „ Pahang Section	...	...	894,311.23
Through Main Line, Kuala Lumpur to Salak South and Marshalling Sidings	...	...	417,051.01
Kedah Railway Extension, Bukit Mertajam to Alor Star	...	...	2,652,467.39
Railway from Pudu to Ampang Construction	...	...	239,685.72
Doubling, Prai to Bukit Mertajam, and Alterations, Prai	...	...	25,315.60
Kuang to Batang Berjuntai Extension	...	...	22,519.43
Ayer Kuning to Jasin Extension	...	...	15,451.96
Trial Surveys, East Coast Railway	...	...	56,235.40
Permanent Survey, Pahang Kelantan Boundary to Kota Bharu	...	...	29,778.42
Permanent Survey, Railway Extension to Alor Star	...	...	11,621.27
Bridge over Johore Straits	...	...	23,897.50
Survey, Kuang to Batang Berjuntai Extension	...	...	22,807.48
„ Klang to Morib Extension	...	...	14,950.59
„ Bagan Serai to Kuala Krau	...	...	30,720.34
„ Ayer Kuning to Jasin Extension	...	...	23,516.23
„ Railway to Gunong Tahan	...	...	2,271.41
Surveys of possible new lines	...	...	9,820.41
Total	...	...	<u>\$7,405,686.04</u>

166. SEMANTAN-KUALA TEMBELING RAILWAY.—This Railway forms the second portion of the Pahang Branch of the East Coast Railway and is $42\frac{1}{3}$ miles, in length. The total completed length of line from Gemas being 117 miles, of which $110\frac{1}{2}$ miles was opened for traffic in 1912 and the remaining portion $6\frac{1}{2}$ miles to Tembeling was opened for traffic during the year under review.

The expenditure during the year amounted to \$115,624.49.

167. PADANG JAYA-KUALA SELANGOR RAILWAY.—This Railway runs from Klang to Kuala Selangor and is $29\frac{3}{4}$ miles in length. The survey was completed in March, 1911, and the construction was commenced in April, 1911, and the progress of the work has been as follows :

Jungle felling and clearing has been completed. Out of a total of 529,374 cubic yards of earthwork in the whole line, 612,874 cubic yards have been executed (excess over estimate is due to subsidence). The total number of bridges and culverts provided for in the estimate is 66, all of which are completed. The permanent way has been laid for the whole length of the line. During the year a total length of $25\frac{1}{8}$ miles from Klang North to Asam Jawa was opened for traffic.

The expenditure during the year amounted to \$337,087.20.

168. EAST COAST RAILWAY : KELANTAN SECTION.—This Railway starts from Tumpat and proceeds southwards towards Tembeling in Pahang. The length of the line under construction at present in Kelantan is 32 miles, and the progress made during the year has been as follows :

Jungle felling and clearing has been completed for the whole length. Out of a total of 666,296 cubic yards of earthwork in the first 32 miles, 619,451 cubic yards have been executed. The total number of bridges and culverts in the first 32 miles is 81, of which 49 are completed and 12 are in progress. Permanent way has been laid for $29\frac{1}{4}$ miles and ballasted for 27 miles.

The expenditure during the year amounted to \$2,460,588.97.

169. EAST COAST RAILWAY : PAHANG SECTION.—This Railway starts from Tembeling and proceeds northwards towards Tumpat. The length of the line under construction at present in Pahang is 12 miles. Work was commenced in May, 1913, and the progress of the work has been as follows :

Jungle felling has been completed for $11\frac{1}{2}$ miles and cleared for $9\frac{1}{4}$ miles. Out of 1,544,365 cubic yards in the 12 miles of line from Tembeling, 223,399 cubic yards have been executed. The total number of bridges and culverts provided for in the 12 miles is 66, of which four are completed and six are in progress.

The expenditure during the year amounted to \$894,311.23.

170. THROUGH MAIN LINE, KUALA LUMPUR TO SALAK SOUTH.—The length of this line is 5 miles 64 chains. Construction work commenced in January, 1912, and the whole of the work was completed and opened for traffic on 1st September, 1913.

The expenditure during the year amounted to \$417,015.01.

171. KEDAH RAILWAY EXTENSION : BUKIT MERTAJAM TO ALOR STAR.—This line is 56 miles in length and branches off from the main line at Bukit Mertajam, in Province Wellesley, and proceeds in a northerly direction to Alor Star, the capital of Kedah. The construction of this line was commenced late in 1912, and the progress has been as follows :

Jungle felling and clearing has been completed all along the line. Out of a total of 3,103,372 cubic yards of earthwork, 1,328,316 cubic yards of earthwork and 69,363 cubic yards of rock have been executed. The total number of bridges and culverts is 123, of which 67 are completed and 32 are in progress. The permanent way has been laid for 23 miles and ballasted for $18\frac{1}{2}$ miles.

The expenditure during the year amounted to \$2,652,467.39.

172. RAILWAY, PUDU-AMPANG CONSTRUCTION.—The length of this line is four miles. Construction work commenced during January, 1913, and the progress of the work has been as follows :

Jungle felling and clearing was completed. Out of a total of 126,366 cubic yards in the whole line, 101,422 cubic yards have been executed. The total number of bridges and culverts is 34, of which 20 are completed and four are in progress. Permanent way has been laid for the whole length of the line.

The expenditure during the year amounted to \$239,685.72.

173. DOUBLING, PRAI-BUKIT MERTAJAM, AND ALTERATIONS, PRAI.—The doubling of this section is from Prai to Bukit Mertajam, a distance of 6 miles 42 chains. Work on doubling was commenced late in 1913, and the progress has been as follows :

Seven thousand two hundred cubic yards of earthwork have been executed, and the bridges and culverts provided for are 14, of which one is in progress.

The expenditure during the year amounted to \$25,315.60.

174. KUANG TO BATANG BERJUNTAI RAILWAY.—The length of this line from Kuang to Batang Berjuntai is 15 miles. Work was commenced in November, 1913, and the progress has been as follows :

Jungle felling has been completed for $5\frac{3}{4}$ miles and cleared for four miles. Thirty-two thousand two hundred and seventy-three cubic yards of earthwork have been executed.

The expenditure during the year amounted to \$22,519.43.

175. TRIAL SURVEYS, EAST COAST RAILWAY, AND PERMANENT SURVEY, PAHANG-KELANTAN BOUNDARY TO KOTA BAHRU.—Trial surveys of 138 and 141 miles were run in Pahang and Kelantan, respectively.

The permanent survey was completed in Pahang to the $33\frac{1}{2}$ miles from Teimbeling, and in Kelantan to the 42nd mile from Tumpat.

The expenditure during the year amounted to \$86,013.82.

176. BRIDGE OVER JOHORE STRAITS.—This work was commenced in September, 1912, and the following progress has been made :

Base lines were fixed on both sides of the Straits, chained and triangulation completed. The surveys of the approaches on the north of Johore side and on the south of Woodlands side were completed and reduced levels of bench marks on both sides and mean high water level were ascertained. Soundings across the Straits were taken. Bores were sunk on the proposed site of bridge aggregating a total depth of 678 feet 8 inches. The survey was completed at end of April, 1913.

The expenditure during the year amounted to \$23,897.50.

177. KUANG TO BATANG BERJUNTAI RAILWAY SURVEY.—The trial and permanent survey of this Railway was completed during the year under review.

The expenditure during the year amounted to \$22,807.48.

178. KLANG TO MORIB RAILWAY SURVEY.—This Railway runs from Klang on the Port Swettenham main line to Morib, and is $21\frac{1}{2}$ miles in length. Work on the trial survey was commenced on 22nd April, 1913, and the permanent survey was completed during the year under review.

The expenditure during the year amounted to \$14,950.59.

179. BAGAN SERAI TO KUALA KRAU RAILWAY.—This Railway runs from Bagan Serai on the main line to Kuala Krau, and is about eight miles in length. Work on the survey was commenced on 1st February, 1913, and permanent survey was completed during the year under review.

The expenditure during the year amounted to \$30,720.34.

180. MALACCA TO GEMAS RAILWAY SURVEY.—This survey which was commenced on 18th December, 1912, originally ran from Malacca to Ayer Kuning via Jasin. It has been decided to abandon the portion from Ayer Kuning to Jasin, and proceed instead from Malacca to Gemas via Jasin, the total length of which is about 42 miles. Work on the new survey was commenced on 10th November, 1913, and 113 miles of trial location and six miles of permanent location were done during the year under review.

The expenditure during the year amounted to \$23,516.23.

181. RAILWAY TO GUNONG TAHAN.—The preliminary survey of this mountain railway which starts from a point on the East Coast Railway to the site of a proposed hill station to Gunong Tahan, 5,200 feet above sea-level, a distance of about 30 miles, was completed during the year.

The expenditure during the year amounted to \$2,271.40.

182. SURVEYS OF POSSIBLE NEW LINES.—A reconnaissance survey of a proposed continuation of the Klang-Morib Extension to Sepang Road on the main line, a distance of about 24 miles, was made during the year under review.

A start on the survey of proposed railway from Ipoh on the main line to Gopeng and thence to Kampar on the main line was made on the 17th November, 1913, and 15 miles of preliminary survey was completed during the year under review.

A preliminary survey of the Seremban to Port Dickson Line, 25 miles in length, was made during the year under review to improve the existing line of Railway as it has heavy gradients and short excessive curvature.

The expenditure during the year on surveys of possible new lines amounted to \$9,820.41.

GENERAL.

Mr. S. M. Gregory, Chief Accountant and Auditor, retired on pension with effect from 7th June, 1913, owing to ill-health. Mr. Gregory entered the service as Accountant, Perak State Railway, on 13th August, 1885, and at the time of retirement held the appointment of Chief Accountant and Auditor.

Mr. F. A. Punter was appointed Signal and Telegraph Engineer on 16th January, 1913, the post being rendered vacant by the death of the late Telegraph Engineer Mr. G. H. Phillips.

Mr. E. A. Cook, Traffic Manager, went on long leave on 21st March, 1913.

Mr. F. D. B. Openshaw, Deputy Chief Resident Engineer, Construction, went on long leave on 26th June, 1913.

Mr. F. Mills, District Engineer, Grade (I), went on long leave on 25th July, 1913.

Mr. P. H. Henshaw, Deputy Traffic Manager, returned from long leave on 24th January, 1913.

Mr. J. C. G. Spooner, District Engineer, Grade (III), went on long leave on 5th February, 1913.

Mr. H. G. Richards, District Engineer, Grade (II), who was due back from long leave on 1st November, 1913, was granted an extension of nine months on half salary from that date.

Mr. A. Palmer, District Engineer, Grade (III), went on long leave on 25th March, 1913.

Mr. C. F. S. Blacklaw, Assistant Traffic Manager, returned from long leave on 17th June, 1913.

Mr. I. A. Shipway, Assistant Traffic Manager, went on long leave on 1st July, 1913.

Mr. W. H. Elkins, Assistant Traffic Manager, went on long leave on 9th August, 1913.

Mr. A. I. Mackenzie, Assistant Accountant, went on long leave on 15th November, 1913.

Mr. C. Wilson, District Locomotive Superintendent, returned from long leave on 1st February, 1913.

Mr. A. C. Ferdinands, District Locomotive Superintendent, went on long leave on 12th April, 1913, and returned and resumed duty on 12th December, 1913.

PUBLIC OFFICERS' GUARANTEE FUND.

183. The number of officers in the Railway Department contributing to the Public Officers' Guarantee Fund on the 31st December, 1913, was 1,446 as compared with 1,108 at the end of the previous year. Entrance fees and contributions amounted to \$3,238.97, representing an aggregate security of \$555,100.

WIDOWS AND ORPHANS' PENSION ENACTMENT.

184. There were 485 contributors under the Widows and Orphans' Pension Enactment at the end of 1913 as compared with 428 at the end of the previous year.

RAILWAY SERVANTS' BENEFIT FUND.

185. The total receipts on account of the Railway Servants' Benefit Fund during the year (including interest) amounted to \$3,158.83, an increase of \$316.84 over the amount received in 1912. The payments from the Fund totalled \$2,732.37 as against \$3,175 in the previous year, leaving a balance to the credit of the Fund on the 31st December, 1913, of \$7,164.50 as compared with \$6,638.04, twelve months ago.

186. The following appendices accompany this report:

- A. Statement of capital account, open lines, to 31st December, 1913;
- A. (i) Statement of total expenditure on capital account for new lines under construction and surveys, and special services votes, 1913;
- B. Statement of working expenditure and revenue for 1913;
- C. Abstract of working expenses;
- D. Statement of revenue detailed;
- E. Monthly earnings of coaching and goods;
- F. Comparative statement of expenditure;
- G. General financial statement, 1913;
- H. Statement of receipts and expenditure for the year ending 31st December, 1913;

- I. Net profit earned by Federated Malay States Railways between 1885 and 1913, inclusive;
 - J. Statement of expenditure on special services, revenue account, for the year ending 31st December, 1913;
 - K. Statement of expenditure on special services, capital account, for the year ending 31st December, 1913;
 - L. Statement showing the details of reimbursements for the years 1913 and 1912;
 - M. Statement showing the details of sundry receipts for the years 1913 and 1912;
 - N. Goods and coaching, miscellaneous, detailed, 1913;
 - O. Statement showing the dates on which the various sections were opened for traffic;
 - P. Abstract of expenditure on capital account, motor services, to 31st December, 1913;
 - Q. Statement showing capital cost of cars running on 31st December, 1913, and depreciation on same;
 - R. Revenue account on motor services for the year ending 31st December, 1913;
 - S. Balance-sheet to the 31st December, 1913;
 - T. Motor services, sectional receipts, mileage, etc.;
 - U. Store advance account;
 - V. Statement showing average expenditure per mile per month up to 31st December, 1913;
 - W. Comparative statement of expenditure on engines, carriages and wagons running, but excluding steam ferries, for the years 1912 and 1913;
 - X. Comparative statement of expenditure on steam boats and tongkangs for the years 1912 and 1913;
 - Y. Comparative statement of engines repaired for the years 1912 and 1913;
 - Z. Comparative statement of rolling stock for the years 1912 and 1913;
 - Z. (i) List of machinery in workshops;
 - Z. (ii) List and condition of the locomotive engines and tenders on 31st December, 1913;
 - Z. (iii) Weight of locomotives on the 31st December, 1913;
 - Z. (iv) Statement showing staff and labour force employed in the Railway Department on 31st December, 1913;
- Statistical diagrams of goods and passengers traffic, and receipts and expenditure, for the years 1903 and 1913.
- A sketch map of the Federated Malay States Railway system.

P. A. ANTHONY,

General Manager, F.M.S. Railways.

GENERAL MANAGER'S OFFICE,
Kuala Lumpur, 8th May, 1914.

APPENDIX A.

STATEMENT OF CAPITAL ACCOUNT, OPEN LINES, TO 31ST DECEMBER, 1913.

MILEAGE.		SECTION.							AMOUNT.	
M.	CH								\$	c.
...	...	Works in Penang	...	...	...	...	...	...	605,568	69
...	...	Steam Ferry Service	...	...	...	...	...	...	228,407	50
23	20	Prai-Parit Buntar	...	...	...	...	...	...	2,436,087	57
43	09	Parit Buntar-Taiping, including Port Weld Branch	...	...	...	...	...	...	3,199,790	44
18	66	Taiping-Kuala Kangsar	...	...	...	...	...	...	3,779,206	14
84	54	Kuala Kangsar-Telok Anson Wharves	...	...	...	...	...	...	7,454,893	40
15	50	Ipoh-Tronoh Mines	...	...	...	...	...	...	865,652	02
44	01	Tapah Road-Tanjong Malim	...	...	...	...	...	...	4,550,296	93
102	64	Tanjong Malim-Kajang, including Port Swettenham and Sultan Street-Salak South Branches	...	...	...	...	...	...	12,631,365	78
25	12	Connaught Bridge Junction-Asam Jawa	...	...	...	...	...	...	2,036,837	02
...	...	New Passenger Station, Kuala Lumpur	...	...	...	...	...	...	894,879	28
...	...	Railway Offices, Kuala Lumpur	...	...	...	...	...	...	133,266	99
5	21	Batu Junction-Batu Caves	...	...	...	...	...	...	357,673	83
...	...	Central Workshops	...	...	...	...	...	...	1,400,410	86
28	78	Kajang-Seremban	...	...	...	...	...	...	3,417,090	66
63	33	Seremban-Gemas	...	...	...	...	...	...	6,257,727	78
24	66	Seremban-Port Dickson	...	...	...	...	...	...	1,064,570	54
21	13	Tampin-Malacca	...	...	...	...	...	...	1,879,073	55
75	55	Gemas-Semantan	...	...	...	...	...	...	6,326,449	94
12	78	Bahau-Kuala Pilah	...	...	...	...	...	...	582,828	45
40	78	Semantan-Tembeling	...	...	...	...	...	...	4,565,078	79
...	...	Additional Works, Gemas	...	...	...	...	...	...	128,326	80
...	...	Cart Road, Gemas to Johore Boundary	...	...	...	...	...	...	13,310	55
...	...	Johore Wagon Ferry ($\frac{1}{3}$ share)	...	...	...	...	...	...	174,622	61
...	...	Cable across Johore Straits	...	...	...	...	...	...	1,679	11
19	41	Singapore Line	...	...	...	...	...	...	4,210,435	86
650	19								69,195,531	09
		Automobile Service	...	...	...	...	...	...	433,915	37
Total									69,629,446	46

APPENDIX A (i).

STATEMENT OF TOTAL EXPENDITURE ON CAPITAL ACCOUNT FOR NEW
LINES UNDER CONSTRUCTION AND SURVEYS AND SPECIAL SERVICES
VOTES, 1913.

	\$	c.	\$	c.
LINES UNDER CONSTRUCTION AND SURVEYS.				
East Coast Railway, Kelantan Section	2,370,368	96
Do. do. Pahang Section	1,035,352	62
Kedah Railway Extension, Bukit Mertajam to Alor Star...	2,647,383	96
Survey, Ayer Kuning to Jasin Extension	23,516	23
Construction, Ayer Kuning to Jasin Extension	206,631	02
Survey, Klang to Morib Extension	14,950	59
Do. Kuang to Batang Berjuntai Extension	22,807	48
Construction, Kuang to Batang Berjuntai Extension	191,387	29
Surveys of possible New Lines	25	22
Do. preliminary, Seremban to Port Dickson	6,683	21
Do. do. Morib to Sepang	381	41
Do. do. Ipoh to Kampar <i>via</i> Gopeng	2,680	96
Doubling line Prai to Bukit Mertajam and alterations, Prai.	139,442	35
Bridge over Johore Straits	23,941	03
Railway from Pudu to Ampang Construction	244,185	60
Do. from Bagan Serai to Kuala Kurau	122,837	19
Do. to Gunong Tahan Survey	2,271	40
Semantan-Kuala Tembeling Railway	117,733	04
Permanent Survey, Pahang-Kelantan Boundary to Kota
Bahru	29,776	57
Padang Java-Kuala Selangor Railway	337,868	28
Trial Surveys, East Coast Railway	55,553	58
Permanent Survey, Railway Extension to Alor Star	12,758	33
Through Main Line, Kuala Lumpur to Salak South and
Marshalling Sidings	411,282	64
			8,019,818	96
SPECIAL SERVICES.				
Steam Ferry Services	7,789	43
Province Wellesley	50,845	96
Perak	728,836	06
Selangor	934,457	10
Railway Offices	10,799	94
New Passenger Station	182,843	42
Central Workshops	57,510	66
Nagri Sembilan	403,601	65
Malacca...	46,280	76
Pahang	154,916	16
Singapore	4,210,435	86
			6,788,317	00
Total	14,808,135	96

APPENDIX B.
STATEMENT OF WORKING EXPENDITURE AND REVENUE FOR 1913.

EXPENDITURE.	See Abstract.	Year ending 31st December.		REVENUE.	Year ending 31st December.	
		1913.	1912.		1913.	1912.
		\$ c.	\$ c.		\$ c.	\$ c.
General Management	A	274,247 10	453,934 60	Passengers, 1st Class	489,629 11	442,487 28
Traffic Department	B	1,330,672 37	1,107,531 79	" 2nd "	984,204 56	732,167 05
Locomotive "	C	2,895,288 08	1,991,558 81	" 3rd "	3,668,736 44	3,336,157 16
Engineering "	D	2,039,021 98	1,899,901 24	Season Tickets	37,030 24	29,936 73
Store "	E	42,910 19	40,532 00	Total Passengers	5,179,600 35	4,540,748 22
Telegraph "	F	201,762 64	167,051 84	Horses, Carriages, Parcels, etc.	205,682 01	179,404 87
Motor Service	G	56,775 41	94,161 36	Mails... ..	22,911 34	18,060 56
Balance Net Revenue for 1913 after paying Working Expenses		2,707,696 23	2,666,345 23	Special Trains	1,624 93	3,384 15
				Excess Fares and Luggage	104,713 27	97,713 56
				Total Coaching	5,514,531 90	4,839,311 36
				General Merchandise	3,581,005 79	3,072,270 70
				Live Stock	137,548 46	119,653 53
				Total Goods	3,718,554 25	3,191,924 23
				Rents	71,606 58	60,784 74
				Miscellaneous	202,156 04	260,238 75
				Motor Car Service	41,525 23	68,757 79
				Total Miscellaneous	315,287 85	389,781 28
Total		9,548,374 00	8,421,016 87	Total	9,548,374 00	8,421,016 87

	\$ c.
Total Revenue, 1913	9,548,374 00
Add outstanding on 31st December, 1912	47,889 71
	9,596,263 71
Less " " " 1913	86,238 20

APPENDIX C.
WORKING EXPENSES, DETAILED ABSTRACT.

Heads of Account.	1913.		1912.		Increase.	Decrease.
	\$	c.	\$	c.	\$	c.
A.—GENERAL MANAGEMENT.						
Salaries and Allowances of General Manager and Staff	35,020	96	58,165	46	...	23,144 50
Salaries and Allowances of Chief Accountant and Auditor and Staff	99,917	15	95,345	69	4,571	46
Advertising, Printing and Stationery	4,296	47	4,297	93	...	1 46
Allowances to Consulting Engineers	16,242	78	16,692	21	...	449 43
General Charges	8,034	74	11,880	46	...	3,845 72
Clearing House ... ..	...		5,164	17	...	5,164 17
	163,512	10	191,545	92	4,571	46
Special Services on Revenue a/c ...	110,735	00	262,388	68	...	151,653 68
Total ...	274,247	10	453,934	60	4,571	46
B.—TRAFFIC DEPARTMENT.						
Salaries of Traffic Manager and Staff	104,012	98	86,707	02	17,305	96
„ Station Masters, Clerks, etc.	359,097	79	321,608	53	37,489	26
„ Guards, Shunters and Signalmen	94,092	73	76,646	14	17,446	59
„ Pointsmen, Porters, Watchmen, etc. ...	152,575	87	128,709	30	23,866	57
Loading and Unloading Goods ...	373,535	34	293,199	69	80,335	65
Overtime, Sunday and Night Allowances... ..	119,381	70	95,136	18	24,245	52
Stores, Stationery, Tickets and Books	65,930	84	56,277	53	9,653	31
Uniforms	15,130	46	13,657	53	1,472	93
Claims	7,115	59	6,517	50	598	09
General Charges	39,641	39	21,804	53	17,836	86
	1,330,514	69	1,100,263	95	230,250	74
Special Services on Revenue a/c ...	157	68	7,267	84	...	7,110 16
Total ...	1,330,672	37	1,107,531	79	230,250	74
C.—LOCOMOTIVE DEPARTMENT.						
Salaries and Allowances of Locomotive Superintendent and Staff	62,048	14	48,536	20	13,511	94
Salaries and Allowances of Drivers and Firemen	288,441	34	238,267	73	50,173	61
Salaries and Allowances of Running Shed Staff	109,652	57	94,765	05	14,887	52
Salaries and Allowances of Workshop Staff	43,157	25	35,115	98	8,041	27
Fuel	805,271	22	517,857	24	287,413	98
Running Stores	107,885	59	69,567	80	38,317	79
Maintenance of Engines { Wages ...	188,114	90	152,860	11	35,254	79
and Tenders { Materials... ..	145,930	85	97,205	23	48,725	62
„ Carriages { Wages ...	109,934	47	85,127	66	24,806	81
„ { Materials... ..	77,767	83	50,306	04	27,461	79
„ Wagons { Wages ...	62,299	49	51,122	92	11,176	57
„ { Materials... ..	58,693	97	42,575	98	16,117	99
Electrical Power	14,465	14	13,112	79	1,352	35
Electric Lighting	19,142	38	11,598	07	7,544	31
Maintenance of Workshop, Engines, etc.	45,408	66	25,519	16	19,889	50
Pumping Water for Engines ...	53,320	27	38,416	87	14,903	40
Maintenance of Steam Ferries and Tongkangs	168,089	19	137,869	38	30,219	81
General Charges	59,339	84	39,045	16	20,294	68
	2,418,963	10	1,748,869	37	670,093	73
Special Services on Revenue a/c ...	476,324	98	254,287	51	222,037	47
Total ...	2,895,288	08	2,003,156	88	892,131	20

APPENDIX C—(cont.)

Heads of Account.	1913.	1912.	Increase.	Decrease.
	\$ c.	\$ c.	\$ c.	\$ c.
D.—ENGINEERING DEPARTMENT.				
Salaries and Allowances of Engineers and Staff	276,404 26	231,907 45	44,496 81	
Maintenance of Way { Wages	803,165 14	668,871 74	134,293 40	
{ Materials	312,353 57	299,429 41	12,924 16	
" Stations	55,077 54	53,634 05	1,443 49	
" Staff Quarters	58,066 20	57,461 16	605 04	
" Wharves	22,830 39	15,005 48	7,824 91	
General Charges	72,630 83	54,160 93	18,469 90	
	1,600,527 93	1,380,470 22	220,057 71	
Special Services on Revenue a/c (ordinary)... ..	438,494 05	519,431 02	...	80,936 97
Special Services on Revenue a/c (relaying) ... ..	...	...	...	...
Total ...	2,039,021 98	1,899,901 24	220,057 71	80,936 97
E.—STORE DEPARTMENT.				
Salaries and Allowances of Chief Storekeeper and Staff	38,138 11	36,608 73	1,529 38	
General Charges	4,772 08	3,923 27	848 81	
	42,910 19	40,532 00	2,378 19	
Special Services on Revenue a/c ... ..	...	...	...	...
Total ...	42,910 19	40,532 00	2,378 19	
F.—TELEGRAPH DEPARTMENT.				
Salaries and Allowances of Telegraph Engineer and Staff	94,932 94	68,284 03	26,648 91	
General Charges	24,844 66	11,333 96	13,510 70	
	119,777 60	79,617 99	40,159 61	
Special Services on Revenue a/c	81,985 04	75,835 78	6,149 26	
Total ...	201,762 64	155,453 77	46,308 87	
G.—MOTOR SERVICE.				
Traffic and Locomotive Charges	56,775 41	94,161 36		
Total ...	56,775 41	94,161 36	...	37,385 95

APPENDIX D.

STATEMENT OF REVENUE DETAILED.

Particulars.	1913.		1912.		Increase.		Decrease.	
	\$	c.	\$	c.	\$	c.	\$	c.
Passengers and Excess Fares ...	5,192,616	66	4,558,964	48	633,652	18		
Season Tickets ...	37,030	24	29,936	73	7,093	51		
Parcels and Luggage ...	180,082	88	155,042	13	25,040	75		
Horses, Carriages and Dogs ...	69,210	80	62,966	02	6,244	78		
Special Trains ...	1,624	93	3,384	15			1,759	22
Goods ...	3,581,005	79	3,072,270	70	508,735	09		
Live Stock ...	137,548	46	119,653	53	17,894	93		
Sundry Receipts ...	282,665	06	301,616	13			18,951	07
Total Passengers, Goods, etc.	9,481,784	82	8,303,833	87	1,198,661	24	20,710	29
Motor Service ...	41,525	23	68,757	79			27,232	56
Reimbursements ...	25,063	95	48,425	21			23,361	26
Total ...	9,548,374	00	8,421,016	87	1,198,661	24	71,304	11

Net increase, \$1,127,357.13.

APPENDIX E.

MONTHLY EARNINGS OF COACHING AND GOODS.

1913.			Passengers.	Coaching.	Goods.	Total.
			Numbers.	\$ c.	\$ c.	\$ c.
January	...	...	1,015,454	429,546 43	294,392 85	723,939 28
February	...	...	1,162,591	469,801 43	278,494 11	748,295 54
March	...	...	1,069,433	464,440 60	322,370 14	786,810 74
April	...	...	1,074,112	457,362 00	310,822 28	768,184 28
May	...	...	1,091,010	469,983 96	336,587 65	806,571 61
June	...	...	1,091,818	454,860 16	316,254 98	771,115 14
July	...	...	1,120,842	476,134 71	351,781 92	827,916 63
August	...	...	1,128,750	463,961 05	345,349 32	809,310 37
September	...	...	1,131,491	474,500 56	330,517 26	805,017 82
October	...	...	1,113,472	480,009 18	333,821 01	813,830 19
November	...	...	1,066,490	459,301 35	339,454 22	798,755 57
December	...	...	1,078,196	478,071 21	343,966 44	822,037 65
Total			13,143,659	5,577,972 64	3,903,812 18	9,481,784 82

APPENDIX F.

COMPARATIVE STATEMENT OF EXPENDITURE.

Particulars.	1913.		1912.		Increase.		Decrease.	
	\$	c.	\$	c.	\$	c.	\$	c.
General Management ...	274,247	10	453,934	60			179,687	50
Traffic Department ...	1,330,672	37	1,107,531	79	223,140	58		
Locomotive ...	2,895,288	08	2,003,156	88	892,131	20		
Engineering ...	2,039,021	98	1,899,901	24	139,120	74		
Store ...	42,910	19	40,532	00	2,378	19		
Telegraph ...	201,762	64	155,453	77	46,308	87		
Motor Service ...	56,775	41	94,161	36			37,385	95
Total ...	6,840,677	77	5,754,671	64	1,303,079	58	217,073	45

Net increase, \$1,086,006.13.

APPENDIX G.
GENERAL FINANCIAL STATEMENTS

Year.	Miles Open.	Capital Cost.			Capital Outlay per Mile of Line Open.	No. of Stations.	Train Mileage.	Gross Earnings.	Working Expenses.		
		Railway.	Motor Service.	Total.					Annually Recurrent.	Special Services.	Motor Service.
	M. CH.	\$ c.	\$ c.	\$ c.	\$ c.			\$ c.	\$ c.	\$ c.	\$ c.
1904	339 77	32,035,607 09	...	32,035,627 09	94,222 44	75	1,141,188	3,605,029 25	...	...	...
1905	396 32	37,261,922 72	...	37,261,922 72	94,000 81	87	1,543,626	3,940,598 69	...	...	...
1906	428 67	41,217,865 69	57,140 16	41,275,005 85	96,248 59	93	1,851,516	4,564,099 99	2,991,275 97	...	486 51
1907	428 67	42,215,094 28	220,157 75	42,435,252 03	98,440 77	95	2,018,975	5,200,911 11	2,585,876 08	1,023,262 56	38,154 73
1908	468 54	45,501,086 53	422,344 14	45,923,430 67	97,136 33	108	1,958,559	5,066,153 15	2,684,005 30	662,047 93	110,969 32
1909	469 49	46,066,565 21	447,968 15	46,514,533 36	98,094 84	111	2,221,567	5,188,110 36	2,730,520 57	828,741 16	140,505 29
1910	538 17	51,335,128 16	448,955 37	51,784,083 53	95,380 78	119	2,195,066	5,868,506 68	2,838,438 63	632,419 59	150,574 67
1911	559 02	54,264,338 19	448,955 37	54,713,293 56	97,069 61	119	2,549,091	7,058,689 03	3,256,531 96	385,899 04	134,983 12
1912	F.M.S.R. 593 73 J.S.R. 120 61 S.G.R. 19 41	58,995,133 47	448,905 37	59,444,038 84	99,333 04	151	3,194,200	8,421,016 87	4,541,299 45	1,119,210 83	94,161 36
1913	771 a 00	69,195,531 09	433,915 37	69,629,446 46	106,415 78	166 b	3,351,045	9,548,374 00	*5,676,205 61	*1,107,696 75 c	*56,775 41

* Includes expenditure for

(a) F.M.S.R. ... M. C.
Leased line, J.S.R. ... 650 19
Total ... 120 61
771 00

(b) F.M.S.R. ... 149 stations.
J.S.R. ... 17
Total ... 166

(c) Includes rents
J.S.R. ...

TEMENT, 1913.

Total.	Net Earnings.	Proportion of Working Expenses to Gross Receipts.			Profit on Capital.	Total Earnings per Mile of Line Open per Week.	Working Expenses per Mile of Line Open per Week.			Total Earnings per Train Mile.	Working Expenses per Train Mile.			Net Earnings per Train Mile.
		Annually Recurrent.	Special Services.	Total.			Annually Recurrent.	Special Services.	Total.		Annually Recurrent.	Special Services.	Total.	
\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	%	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	\$ c.	c.	\$ c.	\$ c.
2,130,118 18	1,474,911 07	...	...	59 09	4.60	203 90	...	...	120 48	3 16	...	...	1 87	1 29
2,277,550 54	1,663,048 15	...	...	57 80	4.46	191 17	...	...	110 49	2 55	...	...	1 48	1 07
2,991,762 48	1,572,337 51	...	...	65 55	3.81	204 67	...	...	134 16	2 47	...	...	1 62	85
3,647,293 37	1,553,617 74	50 40	19 94	70 34	3.60	230 09	115 96	45 89	161 85	2 54	1 28	51	1 79	75
3,457,022 55	1,609,130 60	54 39	13 42	67 81	3.49	202 58	110 19	27 18	137 37	2 52	1 37	34	1 71	81
3,699,767 02	1,488,343 34	54 31	16 48	70 79	3.18	205 87	111 81	33 94	145 75	2 26	1 23	37	1 60	66
3,621,432 89	2,247,073 79	49 74	11 08	60 82	4.35	203 92	101 42	22 60	124 02	2 60	1 29	29	1 58	1 02
3,777,414 12	3,281,274 91	47 12	5 58	52 70	6.03	237 77	112 03	13 27	125 30	2 71	1 28	15	1 43	1 28
5,754,671 64	2,666,345 23	54 37	13 40	67 77	4.56	223 86	121 73	29 97	151 69	2 61	1 42	35	1 77	84
6,840,677 77	2,707,696 23	59 71	11 65	71 36	3.93	241 48	144 18	28 13	172 31	2 83	1 69	33	2 02	81

or 12½ months.

of leased line
... \$110,000

STATEMENT OF RECEIPTS AND EXPENDITURE FOR THE YEAR ENDING 31ST DECEMBER, 1913.

Cr.

Corresponding period last year. 1912.	Expenditure.	Year ending 31st December, 1913.	Corresponding period last year. 1912.	Receipts.	Year ending 31st December, 1913.
\$ c.		\$ c.	\$ c.		\$ c.
	GENERAL MANAGEMENT—				
58,165 46	Salaries and Allowances of General Manager and Staff	35,020 96			
95,345 69	Salaries and Allowances of Chief Accountant and Auditor and Staff	99,917 15	442,487 28	Passengers, 1st Class, No. 286,555	489,629 11
4,297 93	Advertising, Printing and Stationery	4,296 47	732,167 05	" 2nd " 1,607,207	984,204 56
16,692 21	Allowances to Consulting Engineers	16,242 78	3,336,157 16	" 3rd " 11,249,897	3,668,736 44
11,880 46	General Charges	8,034 74		Total Passengers ... 13,143,659	5,142,570 11
5,164 17	$\frac{1}{3}$ Share Clearing House		4,510,811 49		
	Total ...	163,512 10			
191,545 92	Total Special Services on Revenue Account ...	110,735 00			
262,388 68					
	Total General Management ...	274,247 10			
453,934 60					
.14	Per train mile ... ..	.08			
	.06 Annually Recurrent .05		3,384 15	Special Trains	1,624 93
	.08 Special Services .03		29,936 73	Season Tickets—No. 3,967	37,030 24
			48,152 99	Passengers' Excess Fares	50,046 55
	TRAFFIC DEPARTMENT—			" Luggage	54,666 72
86,707 02	Salaries of Traffic Manager and Staff	104,012 98	49,560 57	Parcels	125,416 16
321,608 53	" Station-masters, Clerks, etc.	359,097 79	105,481 56	Horses, Carriages and Dogs	69,210 80
76,646 14	" Guards, Shunters and Signalmen	94,092 73	62,966 02	Telegraph Collections	11,055 05
128,709 30	" Pointsmen, Porters, Watchmen, etc.	152,575 87	10,957 29	Miscellaneous	86,352 08
293,199 69	Loading and Unloading Goods	373,535 34	75,933 02		
95,136 18	Overtime, Sunday and Night Allowances	119,381 70			
56,277 53	Stores, Stationery, Tickets and Books	65,930 84	4,897,183 82	Total Coaching ...	5,577,972 64
13,657 53	Uniforms	15,130 46			
6,517 50	Claims	7,115 59			
21,804 53	General Charges	39,641 39			
	Total ...	1,330,514 69			
1,100,263 95	Total Special Services on Revenue Account ...	157 68			
7,267 84					
	Total Traffic Department ...	1,330,672 37			
1,107,531 79					
.35	Per train mile ... ..	.40	3,072,270 70	Goods, 1,172,794 tons... ..	3,581,005 79
	.35 Annually Recurrent .40		119,653 53	Live Stock, 136,457 heads	137,548 46
	.00 Special Services .00		72,598 91	Miscellaneous	95,404 85
	LOCOMOTIVE DEPARTMENT—				
46,889 95	Salaries of Locomotive Superintendent and Staff ...	60,397 71	3,264,523 14	Total Goods ...	3,813,959 10
1,646 25	Allowances " "	1,650 43			
135,937 85	Salaries of Drivers and Firemen	164,821 22	8,161,706 96	Total Goods and Coaching ...	9,391,931 74
102,329 88	Allowances " "	123,620 12	48,425 21	Reimbursements	25,063 95
91,074 95	Salaries of Running Shed Staff	107,104 54	142,126 91	Sundry Receipts	89,853 08
3,690 10	Allowances " "	2,548 03			
35,037 84	Salaries of Workshop Staff	42,422 15	8,352,259 08	Total Railway Earnings ...	9,506,848 77
78 14	Allowances " "	735 10	68,757 79	{ Motor Service, Passengers, 1st Class, No. 2,565	41,525 23
517,857 24	Fuel	805,271 22		" " 3rd " 10,384	
69,567 80	Running Stores	107,885 59		Total ... 12,949	
152,860 11	Maintenance of Engines and Tenders { Wages ...	188,114 90			
97,205 23	{ Materials... ..	145,930 85			
85,127 66	" Carriages	109,934 47	8,421,016 87	Total Gross Earnings ...	9,548,374 00
50,306 04	" " { Wages ...	77,767 83			
51,122 92	" Wagons	62,299 49	73,439 37	Outstanding on the 31st December, 1912 ...	47,889 71
42,575 98	" " { Materials... ..	58,693 97			
13,112 79	Electrical Power	14,465 14	8,494,456 24		9,596,263 71
11,500 07	Electric Lighting *	19,142 38	47,889 71	" 31st December, 1913 ...	86,238 20

11,598 07	Electric Lighting *	13,142 53	1,533 71				
25,519 16	Maintenance of Workshop Engines, Machinery and Tools	45,408 66	8,446,566 53	Total Cash Receipts		9,510,025 51	
38,416 87	Pumping Water for Engines	53,320 27					
137,869 38	Maintenance of Steam Ferries and Tongkangs	168,089 19					
39,045 16	General Charges	59,339 84					
1,743,869 37	Total	2,418,963 10					
254,287 51	Total Special Services on Revenue Account	476,324 98					
2,003,156 88	Total Locomotive Department	2,895,288 08	2,803,161 mls.	Train Mileage, Ordinary miles ...	3,272,401		
.63	Per train mile ... ..	.86	58,456 "	Special " ...	41,533		
	.55 Annually Recurrent .72		332,583 "	Non-paying Mileage	37,111		
	.08 Special Services .14		3,194,200 "	Total ...	3,351,045		
231,907 45	WAY AND WORKS DEPARTMENT—						
668,871 74	Salaries and Allowances of Engineers and Staff ...	276,404 26					
299,429 41	Maintenance of Way	803,165 14					
53,634 05	Stations	312,353 57					
57,461 16	Staff Quarters	55,077 54					
15,005 48	Wharves	58,066 20					
54,160 93	General Charges	22,830 39					
1,380,470 22	Total	72,630 83	8,352,259 08	STATISTICS (RAILWAYS)—			
519,431 02	Total Special Services on Revenue Account (ordinary)	1,600,527 93	5,660,510 28	(a) Total Railway Earnings ...		9,506,848 77	
...	(relaying)	438,494 05	2,691,748 80	" " Expenditure ...		6,783,902 36	
1,899,901 24	Total Way and Works Department ...	2,039,021 98		" Net Earnings ...		2,722,946 41	
.60	Per train mile ... ..	.61					
	.43 Annually Recurrent .48						
	.17 Special Services .13						
36,608 73	STORE DEPARTMENT—		2 61	(b) Gross Earnings per train mile ...		2 83	
3,923 27	Salaries and Allowances of Chief Storekeeper and Staff ...	38,138 11	1 77	" Expenditure per train mile ...		2 02	
40,532 00	General Charges	4,772 08		1.42 Annually Recurrent ...	1.69		
...	Total	42,910 19	.84	.35 Special Services ...	.33		
40,532 00	Total Special Services on Revenue Account ...	42,910 19		Net Earnings per train mile ...		.81	
.01	Per train mile ... ..	.01					
	.01 Annually Recurrent .01						
	.00 Special Services .00						
68,284 03	TELEGRAPH DEPARTMENT—						
11,333 96	Salaries and Allowances of Telegraph Engineer and Staff ...	94,932 94	67 77	(c) Working Expenses, 71.36 % of Earnings			
79,617 99	General Charges	24,844 66		54.37 Annually Recurrent ...	59.71		
75,835 78	Total	119,777 60		13.40 Special Services ...	11.65		
155,453 77	Total Special Services on Revenue Account ...	81,985 04		67.77	71.36		
.04	Per train mile ... ..	.06					
	.02 Annually Recurrent .04						
	.02 Special Services .02						
5,660,510 28	Total Railway Expenditure ...	6,783,902 36					
94,161 36	MOTOR SERVICE	56,775 41					
5,754,671 64	Total Gross Expenditure ...	6,840,677 77					

N.B.—Train mileage is station to station mileage, exclusive of shunting. Live stock is taken as 10 heads to the ton.
Vote transferred to Loco. Department on 1-1-13.

APPENDIX I.

NET PROFIT EARNED BY FEDERATED MALAY STATES RAILWAYS
BETWEEN THE YEARS 1885 AND 1913, INCLUSIVE.

Year.	Perak.	Selangor.	Remarks.
	\$ c.	\$ c.	
1885	15,080 46	...	First section in Perak opened on 1st June, 1885 First section in Selangor opened on 15th September, 1886, for light traffic only; earnings, \$9,579.18 only to 31st December, 1886, but no statistics kept
1886	18,363 11	...	
1887	21,923 27	57,703 46	
1888	38,357 18	199,724 27	
1889	37,878 73	194,078 36	
1890	30,211 15	221,369 82	
1891	30,113 23	187,452 30	
1892	15,469 94	231,064 65	
1893	30,597 34	329,775 46	
1894	72,224 58	387,033 43	
1895	165,419 27	425,291 87	
1896	251,314 14	309,405 22	
1897	238,770 88	280,514 43	
1898	233,089 74	248,613 28	
1899	372,346 72	376,076 55	
1900	503,510 87	531,857 96	
1901	502,551 51	576,566 39	
1902	714,210 95	624,082 37	
			\$ c.
	3,291,433 07	5,180,609 82	= 8,472,042 89

Federal—		
1903	...	1,881,685 11
1904	...	1,474,911 07
1905	...	1,663,048 15
1906	...	1,571,863 85
1907	...	1,521,691 58
1908	...	1,588,390 49
1909	...	1,468,180 40
1910	...	2,236,231 14
1911	...	3,269,477 72
1912	...	2,691,748 80
1913	...	2,722,946 41
Total	...	<u>30,562,217 61</u>

APPENDIX J.

STATEMENT OF EXPENDITURE ON SPECIAL SERVICES, REVENUE
ACCOUNT, TO 31st DECEMBER, 1913.

Item No.	Vote.	Expenditure.	
		\$	c.
1.	Two "H" Class Duplicate Boilers	21,571	61
2.	Two Steam Cranes of 20 tons and 5 tons capacity	31,254	01
3.	Two Merryweather's 'Valiant' Steam Pumps	4,295	39
4.	Motor Trains	357	10
5.	One hundred and sixty Goods Vehicles to replace condemned stock ...	312,045	31
6.	New Postal Van for use on through Service Penang to Kuala Lumpur ...	6,093	01
6a.	Ten Steel Lighters	85,139	46
7.	Metallic Circuit Telegraph Line, Kuala Lumpur to Port Swettenham ...	2,872	75
8.	One hundred and fifty standard type Semaphore Signals	18,579	68
9.	Duplicate Telegraph Line, Kuala Lumpur to Padang Java Junction ...	1,186	03
10.	Installation of Electric Tablet System. } Seremban to Port Dickson	7,425	18
11.		Tampin to Malacca	4,521 36
12.		„ Gemas	7,083 06
13.		Batu Junction to Batu Caves	4,316 71
14.	Tapah Road to Teluk Anson Wharf	4,130	39
15.	Electric Motor Circular Saw for Workshops, Kuala Lumpur	856	10
16.	Interlocking of Gates Signals between Kuala Lumpur to Johore Bharu and Kuala Lumpur to Port Swettenham	827	13
17.	Eleven Tyer's Patent Siding Frames	3,654	37
18.	Alterations to Signals at Level Crossings	7,584	52
19.	Installation of Electric Tablet System, Ipoh to Seremban	464	89
20.	Reconstruction of Telegraphs and Telephone, Singapore Railway ...	7,164	40
21.	Installation of Electric Tablet System, Woodlands to Keppel Harbour ...	10,375	22
22.	Rebuilding Staff Quarters, Prai	1,200	00
23.	Gate House near 11/19 T. P., Bukit Mertajam	704	80
24.	Goods Lock-up and converting present Goods Dead-end into Loop Siding, Alma	1,091	67
25.	Combined Water-tank Column, Nebong Tebal	286	80
26.	Raising Sides of Water-tank and Waiting Shed, Parit Buntar	2,495	01
27.	Quarters for European Drivers, Parit Buntar	960	00
28.	Goods Lock-up Roadway and Menial Staff Quarters, Simpang Lima ...	1,444	76
29.	„ and Menial Staff Quarters, Sungei Bogak	1,650	04
30.	Water Supply to Station and Quarters, Bagan Serai	1,000	00
31.	Menial Staff Quarters, two Rooms, Bagan Serai	856	85
32.	Goods Lock-up and Menial Staff Quarters, Alor Pongsu	2,015	16
33.	Extension of Loop, 1050 feet, Bukit Merah	497	45
34.	„ Platform Loop Line, Pondok Tanjong	5,327	36
35.	New Quarters to Foreman Platelayer, Pondok Tanjong	4,571	42
36.	Goods Lock-up and Alterations, Station Buildings, Krian Road	291	97
37.	Extension of 3rd Class Waiting Shed, Taiping	3,489	72
38.	Additional Entrance Running Shed, Taiping	1,001	76
39.	Renewing Existing Culvert near 60½ mile-post, Taiping	937	42
40.	Quarters for Native Signalling Fitter, etc., Taiping	2,600	00
41.	Improvement on Pass Section, Ayer Kuning	5,412	82
42.	Goods Lock-up, Roadway Extension Platform, Padang Rengas	2,874	96
43.	Extension, Platform, Loading Dock Ash Pit, etc., Kuala Kangsar ...	2,806	07
44.	Goods Lock-up, Enggor	1,183	98
45.	„ „ Roadway, Menial Staff Quarters, Salak North	2,614	57
46.	Extension of Platform and Additions to Station Buildings, Sungei Siput	2,177	12
47.	Platform Extension, Chemor	253	81
48.	Quarters for District Railway Engineer, Ipoh	—	—
49.	„ „ Locomotive Superintendent, Ipoh	—	—
50.	Menial Staff Quarters two Rooms, etc., Menglembu	2,612	10
51.	Extension of Goods Siding, etc., Lahat Town	3,099	18
52.	Menial Staff Quarters, two Rooms, etc., Papan	2,460	85

APPENDIX J.—(cont.)

STATEMENT OF EXPENDITURE ON SPECIAL SERVICES, REVENUE
ACCOUNT, TO 31st DECEMBER, 1913—(cont.)

Item No.	Vote.	Expenditure.	
		\$	c.
53.	Water Supply, Earth Filling, etc., Papan	738	44
54.	Menial Staff Quarters, two Rooms, etc., Pusing	2,465	07
55.	Quarters for Permanent Way Overseer „	1,500	00
56.	Menial Staff Quarters, etc., Siputeh	2,664	18
57.	Quarters to Station Master and Clerk, Siputeh	1,367	01
58.	Bay Siding and Rebuilding Menial Staff, etc., Tronoh	5,984	11
59.	Extension of Passenger Platform, Batu Gajah	350	00
60.	Quarters for Coolies and Kapalas, Kampar	1,902	77
61.	Extension of Platform, Temoh	468	86
62.	Quarters for Station Master and Goods Clerk, Teluk Anson Wharf	4,170	83
63.	Take down and Re-erect Temoh Motor Garage „	1,368	43
64.	Extension of Passenger Platform, Signalling, Sungkai	1,049	79
65.	„ Loop Goods Lock-up—Signalling, Trolak	2,060	52
66.	„ „ „ Slim River	2,462	23
67.	Alteration to Station Building, Raising Water-tank, Tanjong Malim	3,427	19
68.	Covering of Concrete Drain, Tanjong Malim	1,017	85
69.	Clerks' Quarters, Tanjong Malim	1,466	96
70.	New Station, Kuala Kubu	11,715	05
71.	Quarters for Married Clerks, Rasa	1,549	75
72.	Extension of Loop Line and Platform, Rasa	544	12
73.	Quarters for Married Clerks, Rawang	803	52
74.	Refreshment Stall, Sungei Buloh	414	19
75.	Extension of Loop and Alterations, Goods Yards, Kepong	3,778	56
76.	Goods Loop Siding, Segambut	1,446	38
77.	Improvement to Cooly Lines, Miscellaneous	3,446	77
78.	Eighty-five Saxby Fireman's Point Locks, Miscellaneous	1,172	17
79.	Share of Government Architect's Services „	1,714	28
80.	Decking Footway of Bidor River Bridge „	1,840	00
81.	Lifting of the Overhead Wind Bracing „	4,767	99
82.	Strengthening Bridges on Teluk Anson Branch, Miscellaneous	3,173	44
83.	Enlargement of Offices at Stations, Miscellaneous	94	50
84.	Two New “Empire” Typewriting Machines, Miscellaneous	350	00
85.	Cooly Lines at 47½ mile, Miscellaneous	1	02
86.	Rebuilding Cooly Lines (Tronoh Line), Miscellaneous	6,378	04
87.	Removal of Earthwork and Draining Embankment, Miscellaneous	88	58
88.	Re-railing Teluk Anson Branch, Miscellaneous	10,831	02
88A.	Extension of Sewers, Railway Offices, Penang, Miscellaneous	6,000	00
89.	Padang Station, Kuala Lumpur	—	—
90.	Extension of Dark Room, Central Railway Office, Kuala Lumpur	—	—
91.	Quarters for Assistant Station Master, Petaling	1,643	50
92.	„ „ „ Sungei Way	1,578	90
93.	Goods Lock-up, Sungei Way	1,350	93
94.	Extension to Menial Staff Quarters, Sungei Way	535	00
95.	Quarters for Assistant Station Master, Batu Tiga	2,399	15
96.	New Station Goods Shed, Batu Tiga	24,115	16
97.	Quarters for Assistant Station Master, Sungei Renggam	1,145	31
97A.	New Verandah Covering to Platform, Klang	17,393	36
98.	Quarters for Goods Clerk, Klang	6	00
99.	„ European Station Master, Klang	205	16
100.	Three Wagon Turn-tables, Port Swettenham	4,948	51
101.	Ice Store, Port Swettenham	1,841	78
102.	Godowns, Sidings and Roadway, Port Swettenham	3,265	80
103.	Loading Dock, Bangi	1,056	61
104.	Alterations to Station Buildings, Batang Benar	541	91
105.	„ „ „ Sepang Road	380	00
106.	New Passenger Goods Station, Labu Village	15,487	93

APPENDIX J.—(cont.)

STATEMENT OF EXPENDITURE ON SPECIAL SERVICES, REVENUE
ACCOUNT, TO 31st DECEMBER, 1913—(cont.)

Item No.	Vote.	Expenditure.	
		\$	c.
107.	New Up Platform and Alteration, Permanent Way, Seremban ...	8,736	99
108.	Carriage Examiner's Cabin, Seremban ...	700	00
109.	Menial Staff Quarters, Kuala Sawah ...	1,495	28
110.	Married Clerk's Quarters, Siliau ...	1,407	20
111.	New Passenger Station, etc., Port Dickson ...	332	68
112.	Quarters for Traffic Staff ...	4,552	35
113.	„ Menial Staff ...	1,323	14
114.	Six Cooly Lines ...	5,911	00
115.	Quarters for Menial Staff, Perhentian Tinggi ...	1,746	94
116.	„ Asst. Station Master, Tampin ...	10,380	64
117.	Loop Ash Pits, etc., Tampin ...	4,363	24
118.	Extension to Station Buildings, Alor Gajah ...	831	75
119.	„ „ Durian Tunggal ...	826	75
120.	Quarters for Menial Staff ...	512	04
121.	„ „ Batang Malaka ...	611	04
122.	„ „ Ayer Kuning South ...	591	00
123.	Telegraph Office and Workshops, Gemas ...	—	—
124.	Quarters for Menial Staff ...	991	48
125.	Sand Drying Furnace ...	168	75
126.	Carriage Examiner's Cabin ...	650	00
127.	Extension of Loco. Store ...	612	00
128.	Customs Shed ...	813	66
129.	Quarters for Menial Staff, Bahau ...	968	80
130.	Extension to Station Building, Const. of Level Crossing, Batu Anam ...	694	54
131.	„ „ Buloh Kesap ...	163	16
132.	Petrol Store, Bentong ...	—	—
133.	Forty Galvanised Lamp Huts ...	841	49
134.	Quarters for Travelling Audit Clerk, Johore Bahru ...	570	00
135.	Rebuilding Stations, Singapore Railway ...	15,851	43
136.	Reconstruction of Killeney Road Bridge, Singapore ...	6,253	27
136a.	Bracing Connaught Bridge, Miscellaneous ...	3,268	99
137.	Survey of Railway Reserves ...	—	—
138.	Supervision of Special Service Works ...	14,581	75
139.	Furniture for Officers Quarters ...	13,766	57
	Weigh-bridge, Weigh-bridge House and Siding, Prai ...	2,778	10
	Goods Lock-up, Bukit Tengah ...	694	36
	„ Simpang Ampat ...	112	73
	Loop Siding and Roadway, Sungei Bogak ...	—	—
	Extension of Goods Siding, Papan ...	346	72
	Concrete drain and cutting back slopes, Kamunting Cutting ...	—	—
	Goods Lock-up, Bidor ...	21	60
	„ Sungkai ...	12	90
	New Siding (unprovided), Batu Gajah ...	104	00
	Quarters for Station Master and Clerks, Menglembu ...	307	28
	„ „ Lahat Town ...	517	39
	„ „ Papan ...	270	50
	„ „ Pusing ...	277	75
	One Additional Room to Cooly Line, Kuala Kubu ...	122	99
	Four Additional Quarters for European Drivers, Kuala Lumpur ...	1,604	56
	„ „ Firemen, etc., Kuala Lumpur ...	310	00
	Additional Quarters for four Guards and two Ticket Collectors, Kuala Lumpur ...	5,086	10
	Quarters for ten Clerks, Central Workshops ...	2,727	73
	Extension of Platform and New Road to Siding, Sungei Way ...	2,773	66
	One Additional Room to Cooly Line, Tapah Road ...	117	00

Item No.	Vote.	Expenditure.
		S c.
Offices for District Traffic Superintendent and Shipping Agents, Port Swettenham	...	5,934 59
Rebuilding Menial Staff Quarters, Serdang	...	517 68
Raising Line, Serdang	...	2,157 01
New Up Platform, Alteration to Station Building, Kajang	...	1,028 07
Anti-malarial Works, Railway Reserve, Labu	...	5,643 97
Additional Accommodation for Clerks, Traffic Manager's Office	...	1,034 99
Enlarging existing Culverts, Port Swettenham Branch	...	4,526 63
Filling up Ground, Chandu Office	...	5,619 95
Remodelling Passenger Station Yard, Klang	...	6,792 56
„ Station Yard, Sungei Renggam	...	1,608 00
Construction of two Blocks Cooly Lines, Kuala Lumpur	...	428 38
Lines for 12 Coolies, Seremban	...	133 01
Goods Siding and Roadway, Kuala Sawah	...	711 39
Goods Shed and Siding, Siliau	...	2,322 55
Raising Line, Port Dickson	...	1,895 19
Quarters for two married Clerks, Port Dickson	...	157 49
Goods Lock-up, Perhentian Tinggi	...	62 62
Remedial Works at Gemas	...	1,388 97
Rebuilding Cooly Lines, Kuala Pilah	...	5,068 94
New Loop Siding, Roadway and Goods Sheds, Sedenak	...	1,674 28
Enquiry Office, Johnston's Pier, Singapore	...	391 47
Quarters for Station Master and Office, Plangei	...	277 13
Furnishing Rest-house, Kuala Krau	...	752 65
Extension of Ticket Printing Office and Plan Room	...	137 44
New Office and Quarters for Station Master, Jempol	...	220 00
Office and Quarters for Station Master, Pemas	...	220 00
Ash Pit and Fuel Stage, Tampin	...	153 99
Raising Line between 181 and 182 mile-posts (unprovided)	...	1,312 79
Lifting Line between 250/1 and 250/2 mile-posts (unprovided)	...	2,994 47
Raising Line at Simpang Ampat	...	982 10
„ between mileage 118/17 and 120/3	...	3,455 72
Construction of Crossing Loop between Siliau and Port Dickson	...	5,351 82
„ New Bridge to replace Bridge No. 30	...	9,552 25
Draining Swampy Ground, Railway Reserve, Port Swettenham	...	700 30
Extending Siding Accommodation, Tronoh Mines	...	121 22
Cost of Drainage near Municipal Stores, Singapore	...	935 00
Strengthening Road between Pulau Saigon and Passir Panjang	...	6,803 22
Additional Culvert at Petaling Station	...	572 48
Five-foot Culvert at T. P. 214/12, Sungei Tampeian	...	1,016 29
Putting Pontoon at Prai in a state of thorough repair	...	775 00
Providing accommodation for Recruits of Railway Police	...	999 00
Goods Shed, Additional Sidings, etc., Ipoh	...	81 81
Filling up present Wells, etc., Malacca Branch	...	538 90
Draining Swamp near Railway Quarters, Central Work Shops	...	2,710 20
Putting in a three-foot Culvert at mileage 207/9, Ulu Yam	...	650 48
Raising the Line at mileage 123/15, Batu Gajah to Kota Bharu	...	2,570 64
Cost of Laying Pipes in certain Railway drains, Singapore	...	983 57
Adapting Old Printing Office to use of Railway Department	...	2,322 07
Protecting the junction of Quarry Siding, Bukit Timah	...	17 64
Acetylene Plant for Lighting Klang Station	...	— —
Quarters for Signal Fitter and Cooly, Tapah Road	...	4 66
Telegraph Store, Tanjong Malim	...	— —
do. Bahau	...	— —
Quarters for Asst. Telegraph Inspector, Bahau	...	— —
Office	...	— —

APPENDIX J.—(cont.)

STATEMENT OF EXPENDITURE ON SPECIAL SERVICES, REVENUE
ACCOUNT, TO 31st DECEMBER, 1913—(cont.)

Item No.	Vote.	Expenditure.	
		\$	c.
Telegraph Store, Johore Bharu		—	—
Cost of furnishing Running Bungalow, Kuala Krau		263	18
Reconstructing of Menial Staff Quarters, Kerling		—	—
Alterations to Block of Houses, Jalan Lumba Kuda, J. Bharu		—	—
Cost of Erecting three Kitson Lamps, Prai Station Yard		—	—
„ Providing a Tablet Siding Frame at the Quarry Siding at the 8th mile on Singapore Section		—	—
Construction of a Loading Dock at Woodlands		234	55
„ a four-foot Culvert under the Lines at Sungei Besi		—	—
Temporary Clerk, Chief Accountant and Auditor's Office		735	00
Furniture for Mr. Hollywood		157	68
Rental for Johore State Railways		110,000	00
Reconstructing Goods Vehicles (Locomotive)		6,416	12
Furniture for District Loco. Superintendent's Office, Kuala Lumpur		442	57
Construction of New Bodies for Coal Storage Vans		6	09
Converting 14 Timber Wagons to Carry Sleepers		2,188	31
Reconstructing Telegraph Line, Seremban to Port Dickson		790	42
Ten Steel Lighters		6,066	00
Payment to Mr. Preece for Report		450	00
Cost of erecting a Railway Telephone Exchange at Ipoh		152	83
		1,119,100	59
Credit—Relaying Ipoh to Padang Rengas 9/09 Account		11,403	84
Total ...		\$1,107,696	75

APPENDIX K.

STATEMENT OF EXPENDITURE ON SPECIAL SERVICES, CAPITAL
ACCOUNT, TO 31st DECEMBER, 1913.

Item No.	Vote.	Expenditure.	
		\$	c.
140.	Two Mail Cars 24 H.P.	—	—
141.	Four Rakes of Mail Type Coaches	155,828	32
142.	Five "H" Class Locomotives	178,466	38
143.	Three "I" Class Locomotives	75,854	90
144.	Additional Goods Stock	811,948	07
145.	Two Hand Cranes	9,816	55
146.	Additional Rolling Stock	2,716	26
147.	Improvement in Loading and Unloading Facilities, Port Swettenham ...	1,951	68
148.	Examining Pits and Extension to Running Shed, Ipoh	4,606	76
149.	Quarters for European Drivers, Ipoh	3,053	88
150.	" Guards and Ticket Collectors, etc., Ipoh	12,825	44
151.	Special Gang Cooly Lines, Ipoh	4,809	82
152.	Telegraph Inspector's Office and Workshop, Ipoh	1,832	84
153.	Quarters for Chief Goods Clerk, Ipoh	1,705	37
154.	New Station and Hotel, Ipoh	225,556	27
155.	" Platform, Malim Nawar	11,130	53
156.	Remodelling Station Yard, Loop Siding, etc., Tapah Road	10,872	29
157.	" " Kuala Kubu	8,606	47
158.	Married Clerks' Quarters, 30 units, Central Workshops	17,671	26
159.	Unmarried Clerks' Quarters, 30 units, Central Workshops	839	80
160.	Artizans' Quarters, 20 units, Central Workshops	4,702	07
161.	Quarters for Machine Shop Foreman, Central Workshops	2,245	49
162.	Acquisition of Land, Roadway, etc., Central Workshops	7,209	93
163.	Extension to Foundries, Central Workshops	135	67
164.	New Carriage Shop including Cranes, Central Workshops	9,750	09
165.	Extension to Locomotive Stores, Central Workshops	1,331	56
166.	" Sawmills, Central Workshops	2,447	18
167.	Proposed New Central Offices, Kuala Lumpur	10,799	94
168.	Three Second Class Quarters, Kuala Lumpur	2,816	80
169.	Quarters for two Police Inspectors, Kuala Lumpur	4,239	68
170.	" Chief Police Inspector, Kuala Lumpur	2,217	62
171.	" Traffic Inspector, Kuala Lumpur	1,700	00
172.	" European Goods Clerk, Kuala Lumpur	1,700	00
173.	" Inspector, Way and Works, Kuala Lumpur	1,700	00
174.	" European Driver, four units, Kuala Lumpur	12,928	22
175.	" Menial Staff, six Rooms, Kuala Lumpur	3,251	19
176.	Additional Goods Accommodation, etc., Kuala Lumpur	8,612	88
177.	Quarters for Coolies and Wiremen, etc., Kuala Lumpur	3,169	12
178.	" Menial Staff Marshalling Sidings, Kuala Lumpur	3,933	95
179.	" " eight Rooms, Kuala Lumpur	3,977	50
180.	" " two Blocks, Kuala Lumpur	5,394	09
181.	Cooly Line, Port Swettenham Junction, two Rooms, Kuala Lumpur ...	1,229	00
182.	Quarters for Signalmen, Salak South Junction, Kuala Lumpur ...	—	—
183.	Earth Filling, River Deviation, Kuala Lumpur	6,833	53
184.	Additional Carriage Washing Shed, Kuala Lumpur	8,092	30
185.	Completion of New Passenger Station, Kuala Lumpur	119,231	04
186.	" Railway Hotel, Kuala Lumpur Station	63,612	38
187.	Third Class Waiting Accommodation, Port Swettenham	—	—
188.	New Goods Shed, Port Swettenham	—	—
189.	New Firewood Depôt and Running Shed, Port Swettenham	10,287	53
190.	European Goods Clerks' and Station Masters' Quarters, Port Swettenham	7,898	78
191.	Clerks' Quarters, six units, Port Swettenham	9,000	00
192.	Quarters for Under Foreman, Port Swettenham	4,211	41
193.	Five Blocks of Offices, Port Swettenham	—	—
194.	New Slipway, Port Swettenham	11,817	87
195.	New Wharf Accommodation, Port Swettenham	442,890	13

APPENDIX K.—(cont.)

STATEMENT OF EXPENDITURE ON SPECIAL SERVICES, CAPITAL
ACCOUNT, TO 31st DECEMBER, 1913—(cont.)

Item No.	Vote.	Expenditure	
		\$	c.
196.	New Timber Tongkang Wharf, Port Swettenham	11,256	41
197.	Remodelling Goods Yard and Quarters for Asst. Station Master, Kajang	13,844	72
198.	Additions and Alterations to Passenger Station, Seremban	25,309	54
199.	Permanent Way Alteration, including Signalling Station Yard, Seremban	4,011	53
200.	Telegraph Office and Workshops, Seremban	4,516	49
201.	Menial Staff Quarters, Seremban	4,185	70
202.	New Carriage Shed, Seremban	8,361	04
203.	New Ash Pit and Alterations to Water Columns, Seremban	90	68
204.	Engine and Carriage Shed, etc., Port Dickson	4,495	25
205.	New Station Building and Siding, Pedas	6,135	81
206.	Remodelling Station Yard, Segamat	3,720	00
207.	" " Genuang	10,222	25
208.	" " Mengkibol	5,161	97
209.	Doubling of Line, Bukit Timah-Tank Road, Singapore	31,763	53
	One New Saloon	444	39
	Additional Machinery Plant and Pump	923	34
	Twenty Bogie Coal Trucks	4	82
	Extension of Smith's Shops, Central Workshops	1,180	80
	Purchase of Land at Central Workshops	4,312	50
	Twelve Additional Clerks' Quarters, Port Swettenham	7,895	83
	Erection of Latrines, etc. for Labourers' Quarters, Kuala Lumpur ...	2,686	75
	Expanded Metal protection, High Street Bridge, Kuala Lumpur ...	558	01
	Purchase of a Block of Land and House, Damansara Road, K. Lumpur	—	—
	Original cost of Motor Garage Re-erected at Teluk Anson	1,390	00
	Purchase of Lot No. 18,093 at Batu Gajah	—	—
	Purchase of two Tongkangs from Construction	4,989	43
	New Launch for Service on Pahang River	2,800	00
	Purchase of two Second Hand Steam Cranes	4,760	97
	Purchase of Timber for Coaches (Additional Rolling Stock)	179,421	30
	New Goods Shed and Siding, Labis	380	78
	Quarters for three Clerks, three Guards, etc., Johore Bharu	1,140	00
	Goods Accommodation at Batu Annam	2,425	22
	Wages unpaid in 1910 in favour of T. A. Peppin	174	50
	Purchase of Singapore Government Railway	4,136,000	00
	Cost of Underframe for New Postal Van	7,518	32
Total ...		86,811,541	72

APPENDIX L.

STATEMENT SHOWING THE DETAILS OF REIMBURSEMENTS
FOR THE YEARS 1913 AND 1912.

Details.	1913.	1912.	Increase.	Decrease.
	\$ c.	\$ c.	\$ c.	\$ c.
Gatemen's Wages	* 1,500 00	950 00	550 00	...
Value of Tools, etc., Recovered ...	* 4,115 88	4,682 39	...	566 51
Upkeep of Siding	* 340 24	712 29	...	372 05
Supply of Electric Current	* 453 60	255 89	197 71	...
Maintenance of Level Crossing ...	* 882 50	810 00	72 50	...
Battening and Fixing Advertisement	* 284 68	...	284 68	...
Electric Stores	* 2,622 61	...	2,622 61	...
Sale of Rails ... ..	...	17,845 62	...	17,845 62
Sale of Scrap Iron ... ..	...	1,441 53	...	1,441 53
Sale of Railway Maps ... ..	...	† 54 00	...	54 00
Sale of Empty Barrels, etc.	3,371 68	1,889 35	1,482 33	...
Crown Agents Rebates, etc.	16,107 24	5,790 69	10,316 55	...
Sale of Unclaimed Rubber	14 40	86 25	...	71 85
Running Powers	1,200 00	2,400 00	...	1,200 00
Sale of Stores, Old Materials, etc. ...	2,095 85	11,507 20	...	9,411 35
Salary Recovered in lieu of Notice, etc.	2,274 78	...	2,274 78	...
Total ...	35,263 46	48,425 21	17,801 16	30,962 91

Net Decrease, \$23,361.26.

* Credited to Expenditure ...	\$10,130 51
„ Revenue ...	25,003 95
Total ...	\$35,263 46

† Sale of Maps transferred to Sundry Receipt in 1913.

APPENDIX M.

STATEMENT SHOWING THE DETAILS OF SUNDRY RECEIPTS
FOR THE YEARS 1913 AND 1912.

Details.	1913.	1912.	Increase.	Decrease.
	\$ c.	\$ c.	\$ c.	\$ c.
Rents... ..	71,606 58	60,784 74	10,821 84	
Firewood Allotments	1,528 45	2,246 45	...	718 00
Supervision, Johore State Railway ...	...	5,258 93	...	5,258 93
Bank Interest	6,428 33	5,573 36	854 97	
17 per cent. Charges on Outside Work	88 61	428 86	...	340 25
Water Supply ... ..	...	2 76	...	2 76
Pocket Time-Table	1,228 60	1,020 45	208 15	
Tariff Books	216 00	...	216 00	
Advertisements	3,732 46	1,617 35	2,115 11	
Stamps	180 75	118 80	61 95	
Motor Launch	4,481 35	1,352 56	3,128 79	
Post Cards	9 00	...	9 00	
Singapore Guides	15 00	...	15 00	
Profit on Sleepers ... ..	...	2,642 11	...	2,642 11
Profit on Second-hand Materials ...	...	46,080 54	...	46,080 54
Profit on Store Advance a/c ... ..	...	15,000 00	...	15,000 00
Sale of Railway Maps	337 95	...	337 95	
Total ...	89,853 08	142,126 91	17,768 76	70,042 59

Net Decrease, \$52,273.83.

APPENDIX N.

COACHING, MISCELLANEOUS, DETAILED, 1913.

	\$ c.
Mail Subsidy	22,911 34
Upkeep of Telegraph Wires	11,578 37
Refreshment Rooms	35,341 45
Found Property	2,750 42
Cloak Room	4,784 33
Registered Luggage	329 98
Sundries	1,607 19
Sleeping Berth Charges	6,664 00
Special Launch	385 00
Total ...	86,352 08

GOODS, MISCELLANEOUS, DETAILED, 1913.

	\$ c.
Sweepings (Rice)	957 47
Ships' Overtime	4,686 15
Wharfage	14,244 35
Tongkang and Launch Hire	11,264 55
Commission on Steamer Freight ...	444 68
Sundries	9,148 66
Lighterage	54,422 99
Special Ferry Receipts	236 00
Total ...	95,404 85

APPENDIX O.

STATEMENT SHOWING THE DATES ON WHICH THE VARIOUS
SECTIONS WERE OPENED FOR TRAFFIC.

NORTHERN DIVISION.			
Date of opening.	From where opened.	To where opened.	Distance. M. CH.
1st June, 1885	Taiping	Port Weld	8 6
6th May, 1890	Taiping	Kamunting	3 50
1st July, 1892	Kamunting	Ulu Sa'petang	5 22
7th November, 1892	Batu Junction	Rawang...	} 36 33
10th July, 1893	Rawang	Serendah	
6th October, 1894	Serendah	Kuala Kubu	
19th May, 1893	Telok Anson	16th mile	16 00
6th September, 1893	16th mile	Tapah Road	1 12
17th October, 1893	Batu Gajah	Ipoh	8 72
27th April, 1894	Kota Bharu	Batu Gajah	5 44
29th September, 1894	Tapah Road	Talam	7 17
18th March, 1895	Talana	Kampar	2 19
1st May, 1895	Kampar	Kota Bharu	8 48
1st June, 1896	Ipoh	Tanjong Rambutan	8 25
27th November, 1896	Tanjong Rambutan	Chemor	4 66
5th July, 1897	Chemor	Sungei Siput	7 72
1st July, 1898	Sungei Siput	Enggor	7 79
1st July, 1899	Prai	Bukit Mertajam	6 40
1st September, 1899	Ulu Sa'petang	Pondok Tanjong	3 48
1st November, 1899	Krian River	Bagan Serai	11 8
1st September, 1900	Bukit Mertajam	Nebong Tebal	13 70
15th September, 1900	Enggor	Kuala Kangsar	5 34
1st November, 1900	Perak Boundary	Tanjong Malim	7
1st August, 1900	Kuala Kubu	Kalumpang	} 14 47
1st November, 1900	Kalumpang	Tanjong Malim	
1st May, 1901	Bagan Serai	Alor Pongsu	4 68
1st July, 1901	Kuala Kangsar	Padang Rengas	6 26
1st February, 1902	Alor Pongsu	Pondok Tanjong	10 55
1st May, 1902	Taiping	Bukit Gantang	5 4
1st May, 1902	Tapah Road	Bidor	7 58
1st May, 1902	Nebong Tebal	Krian River	31
15th July, 1903	Bukit Gantang	Padang Rengas	7 36
15th July, 1903	Bidor	Sungkai	8 8
15th July, 1903	Slim River	Tanjong Malim	13 51
15th August, 1903	Sungkai	Slim River	14 39
15th February, 1905	Batu Junction	Batu Road	36
1st December, 1905	Batu Road	Batu Caves	4 65
15th October, 1908	Ipoh	Tronoh	} 15 50
11th September, 1909	Tronoh	Tronoh Mines	
24th March, 1909	Junction-Telok Anson	New Wharves	53
SOUTHERN DIVISION.			
15th September, 1886	Kuala Lumpur	Klang	} 26 77
1st January, 1899	Klang	Port Swettenham	
7th November, 1892	Kuala Lumpur	Batu Junction	2 33
1st June, 1893	Kuala Lumpur	Pudoh	} 16 76
1st March, 1895	Pudoh	Sungei Besi	
14th August, 1897	Sungei Besi	Kajang	
14th June, 1902	Kajang	Bangi	6 40
1st February, 1903	Bangi	Batang Benar	5 00
2nd April, 1903	Batang Benar	Seremban	17 23
15th July, 1905	Seremban	Tampin	30 22
1st December, 1905	Tampin	Malacca Town	21 13
1st October, 1906	Tampin	Gemas	32 35
28th July, 1908	Seremban	Port Dickson	24 66
4th April, 1910	Gemas	Bahau	22 58
1st October, 1910	Bahau	Kuala Pilah	12 78
1st August, 1911	Triang	Triang	32 72
1st March, 1912	Semantan	Semantan	20 05
16th November, 1912	Kuala Krau	Kuala Krau	16 40
15th May, 1913	Kuala Teh	Kuala Teh	18 31
1st February, 1913	Connaught Bridge	Tembiling	6 07
1st June, 1913	Junction	Kapar	11 62
1st September, 1913	Kapar	Jeram	7 63
1st September, 1913	Jeram	Asam Jawa	5 47
1st September, 1913	Port Swettenham	Salak South Junction	5 46
	Junction		

APPENDIX P.
MOTOR SERVICE.
ABSTRACT OF EXPENDITURE ON CAPITAL ACCOUNT
TO THE 31ST DECEMBER, 1913.

S. S. No.	Account.	To the 31st December, 1912.	During 1913.	Total to the 31st December, 1913.
		s c.	s c.	s c.
	BUILDINGS.			
38/06	Automobile Service	10,185 78	* 1,390 00	68,723 42
51/06	Buildings, Klang-Kuala Selangor ...	3,350 70		
48/07	Five Automobiles (share of) ...	1,403 46		
49/07	Buildings, Klang-Kuala Selangor ...	7,662 57		
50/07	„ Pahang	18,117 84		
67/07	„ Seremban-Kuala Pilah ...	6,438 08	* 4,000 00	
63/08	„ „ „ „ „ „	13,611 32		
64/08	Petrol Store, Temoh-Tapah Road ...	421 82		
71/08	Buildings, Pahang	14,607 09	* 3,500 00	
38/09	Motor Washing Platforms, Klang-K. Selangor, K. Kubu, Seremban-K. Pilah	867 56		
21/10	Petrol Store, Raub	947 20		
	CARS.			
36/08	Automobile Services	43,590 10		362,672 62
47/07	Three Automobiles	26,940 78		
48/07	Five „ „ „ „ „	70,039 02		
41/07	Motor Service	1,102 55		
68/07	Four Chassis	31,191 43	+ 3,050 00	
65/08	Three Spare Bus Bodies	563 75		
66/08	One 2-ton 20 H.-P. Motor Lorry ...	7,536 98		
67/08	One 24 H.-P. Albion Car	6,453 62		
68/08	One Motor Lorry Chassis	43,338 29	+ 1,000 00	
69/08	Four 30-40 H.-P. Bus Chassis ...	31,752 81	+ 800 00	
70/08	„ „ „ Double-decked Buses	32,662 66	+ 1,250 00	
73/08	Two 24 H.-P. Albion Mail Cars ...	19,089 20		
80/08	Miscellaneous, Motor Service ...	26,997 05		
81/08	Four Chassis	2,717 91		
46/09	Three 40 H.-P. Buses	24,796 47		
	MACHINERY.			
71/07	} Tyre Press	2,505 75	...	2,505 75
94/08				
	FURNITURE.			
38/06	Watch	13 58	...	13 58
	Total ...	448,905 37	14,990 00	433,915 37

* Credits by sale of garages at Temoh, Seremban and Bentong.
+ „ „ cars Nos. 23, 25, 29, 33 and 35.

APPENDIX Q.

STATEMENT SHOWING CAPITAL COST OF CARS RUNNING ON 31ST DECEMBER, 1913, AND DEPRECIATION ON SAME.

Car No.	Description of Car.	Reference to Special Services.	Started Running.	Book Value of Cars on 31st December, 1912.	Depreciation at 20 per cent. per annum.		Book Value of Cars on 31st December, 1913.	Remarks.
					Period.	Amount.		
				\$ c.		\$ c.	\$ c.	
21	One 16 H.-P. Albion Lorry ...	48/07	} For report of these Cars, see 1907 report.					Book Value of Cars on 31st Dec., 1913 \$4,546.70 Depreciation— 1907 \$25,261.16 1908 46,175.27 1909 67,794.29 1910 83,243.35 1911 66,244.27 1912 50,305.63 1913 \$25,201.95 Credit Sale of Car ... 6,100.00 19,101.95 358,125.92 362,672.62
17, 18 & 19	Three 16 „ Albion Wagonettes ...	48/07						
12, 13 & 14	Three 30-40 H.-P. Straker Squires ...	61/07&80/08	} For report of these Cars, see 1908 report.	1,639 14	3½ months	1,639 14		
22 & 24	Two 28-32 „ Chassis ...	68/07&81/08		282 57	1½ „	282 57		
40	One 2-Ton 20 H.-P. Lorry ...	66/08		879 30	7 „	879 30		
Inspection Car	One 24 H.-P. Albion Car ...	67/08		538 82	5 „	538 82		
34, 36, 37, 38								
& 39	Five Motor Lorry Chassis ...	68/08		7,545 35	10 „	7,545 35		
30, 31 & 32	Three 30-40 H.-P. Bus Chassis ...	69/08		2,910 68	5½ „	2,910 68		
26 & 28	Two „ „ Double-decked Buses	70/08		3,265 27	6 „	3,265 27		
41 & 42	Two 24 H.-P. Albion Mail Cars ...	73/08		3,181 53	10 „	3,181 53		
43, 44 & 45	Three 40½ H.-P. Buses ...	46/09	} For report of these Cars, see 1909 report.	9,505 99	12 „	4,959 29	4,546 70	
			Total ...	29,748 65	...	25,201 95	4,546 70	

NOTE.—Cars Nos. 22, 24, 26, 28, 30, 32, 34, 37, 38 and 39 now condemned.

APPENDIX Q—(cont.)

STATEMENT SHOWING CAPITAL COST OF MACHINERY AND FURNITURE ON 31st DECEMBER, 1913, AND DEPRECIATION ON SAME.

Description.	Reference to Special Services.	Total Cost.	Book Value on 31st December, 1912.	Depreciation at 10 per cent. per annum.		Book Value on 31st December, 1913.	Remarks.
				Period.	Amount.		
		\$ c.	\$ c.		\$ c.	\$ c.	
Tyre Press ...	71/07 & 94/08	2,505 75	1,503 47	12 months	250 57	1,252 90	Book Value on 31st December, 1913 \$1,252.90
Watch ...	38/06	13 58	...	...	...	...	Depreciation 1909 ... \$264.15
							1910 250.57
							1911 250.57
							1912 250.57
							1913 250.57
							<u>1,266.43</u>
Total ...		2,519 33	1,503 47	...	250 57	1,252 90	<u><u>2,519.33</u></u>

<i>Expenditure.</i>	<i>Per Car Mile, 1912.</i>	<i>Per Car Mile, 1913.</i>	<i>Amount.</i>	<i>Total.</i>	<i>Receipts.</i>	<i>Mile, 1912.</i>	<i>Mile, 1913.</i>	<i>Amount.</i>	<i>Total.</i>
	<i>cts.</i>	<i>cts.</i>	<i>\$ c.</i>	<i>\$ c.</i>		<i>cts.</i>	<i>cts.</i>	<i>\$ c.</i>	<i>\$ c.</i>
TRAFFIC.									
Inspectors' and Conductors' Wages ...	1.5	.8	1,022 75	3,732 34	Traffic	28.5	18.2	22,179 02	41,525 23
Clerical and other Wages	1.8	1.4	1,681 98		Miscellaneous Receipts—				
Watchmen's Wages ... ..	.3	.1	196 00		Conveyance of Mails ...			\$12,479.50
Night Allowances ... ..	.4	.3	404 94		Sale of Stores			106.80
Office Furniture and Equipment ...	...	...	...		Sale of old Rubber			
Stores, Stationery, Tickets and Books...	.1	.1	56 61		and Wheels			454.24	
Rents, Rates and Taxes... ..	.2	.3	308 00		Loss recovered for work-				
Uniforms ... ..	...	...	16 56		ing Pahang Service...			5,402.77
Sundries ... ..	...	...	45 50		Rents of Garages at			
					Seremban and Klang				
	4.3	3.0			Sundries	8.4	15.9	19,346 21	
LOCOMOTIVE.						36.9	34.1		
Automobile Foremen's Wages ...	3.7	4.5	5,457 40	60,951 24	Pahang Services ...			\$35,857.90	43,026 25
Drivers' and Timekeepers' Wages ...	2.5	2.7	3,236 23		Klang-Kuala Selangor			4,345.64	
Fitters' and Cleaners' Wages ...	3.4	3.3	4,036 85		Miscellaneous			1,321.69	
Storekeeper's Wages	1.8	1.5	1,840 60					\$41,525.23	
Coolies' Wages ... ..	.3	.7	790 96					
Watchmen's Wages ... ..	.1	...	...				
Overtime, Sunday and Night Allowance	.6	.8	970 73						
Uniforms ... ..	.1	.1	102 29					
Office Expenses ... ..	.3	.3	356 91					
Fuel, Petrol, Water and Light ...	8.0	7.3	8,904 36						
Oil, Grease and Sundries	1.3	1.7	2,054 87						
Road Allowances... ..	.3	.3	349 61						
Licences ... ..	...	...	50 00					
Repairs and Main- (Wages ...	2.4	2.2	2,728 42						
tenance of Buses (Materials ...	4.0	8.8	10,650 33						
Wages (Tyres Wheels ...	15.0	16.0	19,421 68						
	43.8	50.2			By Balance (loss) carried to Net				
					Revenue	
ENGINEERING.									
Upkeep of Buildings5	.4	515 38	515 38					
" Yards						
	.5	.4							
To Depreciation—Cars	27.0	15.7	19,101 95	19,352 52					
" Machinery1	.2	250 57						
	27.1	15.9	...						
Total ...	75.7	69.5	...	84,551 48	Total ...	36.9	34.1	...	84,551 48

Numbers of Car Miles during the year	121,559	(115,652 Ordinary
Average Number of Buses Running per diem	5.08	5,907 Inspection
" " Journeys made "	7.13	
" Receipts per Bus per diem	22.38	
" " " Journeys per diem	15.94	

APPENDIX S.

BALANCE SHEET TO THE 31st DECEMBER, 1913.

Dr.

Cr.

Capital and Liabilities.						Amount.		Total.		Property and Assets.						Amount.		Total.	
						\$	c.	\$	c.							\$	c.	\$	c.
To Capital		433,915	37	By Excess of Revenue over Expenditure—									
										Account, 1907	...	...	...	...	...	32,099	94
										" 1908	...	...	...	...	...	20,730	72
										" 1909	...	...	...	...	...	20,210	11
										" 1910	...	...	...	...	...	10,842	65
										" 1911	...	...	...	...	...	11,797	19
																95,680	61		
										Less Excess of Expenditure over receipts—									
										Less Account 1912	...	...	\$25,403	57		40,653	75
										Account 1913	...	...	...	15,250	18		55,026 86
										By Buildings—									
										Balance on 1st January 1913	...	...	...	...	...	77,613	42
										Credit sale of garages	...	...	...	...	...	8,890	00
																68,723	42		
										„ Cars—									
										Balance on 1st January, 1913	...	...	...	...	...	29,748	65
										Less Depreciation	...	...	...	...	...	25,201	95
																4,546	70		
										„ Machinery—									
										Balance on 1st January, 1913	...	...	...	...	...	1,503	47
										Less Depreciation	...	...	...	...	...	250	57
																1,252	90		
										„ Stock—									
										Fuel, Petrol, etc.	...	...	...	...	...	110	50
										Oil, Grease and Sundries	...	...	...	...	...	85	92
										Materials	...	...	...	...	...	9,058	66
										Tyres	...	...	...	...	...	3,648	03
																12,903	11		
										„ Balance—									
										Net Loss to 31st December, 1912	...	...	...	...	...	248,436	13
										„ „ during 1913	...	...	...	...	...	43,026	25
																291,462	38		
Total		433,915	37	Total	...			...		433,915	37		

APPENDIX T.

MOTOR SERVICE, SECTIONAL RECEIPTS, MILEAGE, ETC.

	Pahang Services.	Klang to Kuala Selangor.	Miscellaneous.	Total.
Length of Journey (miles) ...	Varies	28		121,559
Miles run ...	101,585	14,005	5,969 *	2,605
No. of Journeys ...	2,116	489		\$41,525.23
Earnings ...	\$35,857.90	\$4,345.64	\$1,321.69	\$0.34.2
" per mile ...	\$0.35.3	\$0.31.0		\$15.94
Average Earnings per Journey ...	\$16.94	\$8.89		\$65,198.96 †
Expenditure ...				\$0.53.8
" per mile ...				157%
" per cent. of earnings ...				

12

* Inspection miles, 5,907. Special Car, 62.

† Cash payment ...	\$56,775.41	
Add—Stock brought forward from 1912 ...	21,467.26	
		\$78,242.67
Less—Stock in hand on 31st December, 1913...	12,903.11	
Bills paid ...	140.60	
		13,043.71
		\$65,198.96

WORKING ACCOUNT FOR THE YEAR 1913.

52

52

Cr.

Dr.										BALANCE SHEET ON 31st DECEMBER, 1913										Credit									
Particulars.										Amount.		Total.		Particulars.										Amount.		Total.			
										s c.		s c.												s c.		s c.			
To Authorized Capital										500,000 00				By Stock on 31st December, 1913										625,747 80					
Amount overdrawn										443,162 79		943,162 79		.. Crown Agents' a/cs for October, November and December, 1913										322,559 14					
To Profit Balance at end of 1912										3,212 99				.. Departmental charges, December, 1913, accounted by Chief Storekeeper in 1914										68 20					
.. carried from Working a/c										5,262 24		8,475 23		.. Sales outstanding as above ... ..										...		948,375 14	
Total ...										...		951,638 02		Total ...										...		951,638 02	

STATEMENT SHOWING AVERAGE EXPENDITURE PER MILE PER MONTH UP TO THE 31st DECEMBER, 1913.

STATEMENT SHOWING AVERAGE EXPENDITURE PER MILE PER MONTH UP TO THE 31st DECEMBER, 1913.																			
Heading of expenditure for detailed Statement.	Items.	Total for 1913.			Total for 1912.			Increase average expenditure per mile per month.	Decrease average expenditure per mile per month.	Heading of expenditure for detailed Statement.	Total for 1913.			Total for 1912.					
		Total length including sidings.	Expenditure from 1st January, 1913 to 31st December, 1913.	Average expenditure per mile per month up to 31st December, 1913.	Total length including sidings.	Expenditure from 1st January, 1912 to 31st December, 1912.	Average expenditure per mile per month up to 31st December, 1912.				Total length including sidings.	Expenditure from 1st January, 1913 to 31st December, 1913.	Average expenditure per mile per month up to 31st December, 1913.	Total length including sidings.	Expenditure from 1st January, 1912 to 31st December, 1912.	Average expenditure per mile per month up to 31st December, 1912.	Increase average expenditure per mile per month.	Decrease average expenditure per mile per month.	
HEADING OF VOTE IN PRINTED ESTIMATES.																			
Establishment—	Engineers	61,234 38	5 57	54,091 83	5 45	12 84	i	Maintenance, Way, Wages—							14,070 02	1 24	11,439 57	1 14	10
	Draftsmen and Tracers	20,304 00	1 84	26,071 11	2 62	12 12		Tools, Permanent Way Repairs							14,070 02	1 24	11,439 57	1 14	10
	Clerks	30,188 32	2 74	1,721 90	17	04		Total									19,350 63	1 93	34
	Peons, Punkah-pullers, etc.	2,385 55	21	57,068 01	5 66	57		Maintenance, Way, Material—							18,021 74	1 59	19,350 63	1 93	34
	I.W.W. and F.G. and P.	68,514 64	6 23	51,048 62	5 10	26		Tools, Permanent Way							18,021 74	1 59			
	Overseers	50,939 51	4 63	11,500 00	1 15	03		Total									5,161 07	51	10 08
	Clerk of Works	10,123 72	89	1,501 23	15	24		Fencing Main Line							6,943 80	61	4,229 11	42	15
	Watchmen	2,064 00	18	13,344 82	1 33	16		Gates, Level-Crossings							5,651 44	50	2,440 52	24	1 46
	Gatemen	12,019 83	1 09	3,090 40	31			Signals							1,000 95	09	75,424 66	7 53	
	Dressers	5,382 35	47					Gardeners, Waterworks and Miscellaneous							66,086 66	6 27	2,284 37	23	04 02
Total		263,156 30	23 85	219,437 92	21 92	1 92	j	Bridge Timbers							3,035 16	02	89,539 73	8 93	1 37
Allowances—	Horse, Bicycle, Rikisha, etc.	1,335 06	12	1,266 72	13	24	k	Protection of Bridges							187 27	02			
	Overtime, Travelling, Sunday and Night	12,346 21	1 12	8,837 66	88	01	l	Total							82,905 29	7 56	4,347 97	43	01 01
	Total	13,681 27	1 24	10,104 38	1 01	23	m	Maintenance, Way, Material—									682 88	07	05
Assessment on Tamil Labour—	Assessment on Tamil Labour	44,714 12	4 06	37,714 00	3 77	29	n	Bridge Timbers							4,741 72	42	2,497 36	25	19
	Assessment on Tamil Labour	44,714 12	4 06	37,714 00	3 77	29	o	Fencing Main Line							630 64	06	3,145 73	31	30
	Total	44,714 12	4 06	37,714 00	3 77	29	p	Gates, Level-Crossings							3,462 33	30	3,158 10	32	45
Miscellaneous Stores—	Drawing Requirements	857 70	08			08	q	Signals							243 53	02	19,232 09	1 92	01
	Instruments	6,266 64	55			55	r	Fencing Stations							11,284 89	99	5,400 05	54	20 08 05
	Total	7,124 34	63			63	s	Miscellaneous							21,696 34	1 91	5,464 02	55	19
Surveys and Demarcation—	Surveys and Demarcation	18 60		413 82	04	04	t	Upkeep, Road—							4,019 59	35	9,458 10	94	14
	Surveys and Demarcation	18 60		413 82	04	04	u	Staff Quarters							9,755 74	35	4,001 38	40	
	Total	18 60		413 82	04	04	a	Stations							3,922 99	19	18,923 50	1 89	
Upkeep of Rest House—	Rest-house	796 49	07			07	b	Level-Crossing							2,150 00	19			
	Rest-house	796 49	07			07	c	Total							19,848 32	1 75	41,488 10	4 14	47
	Total	796 49	07			07	d	Current Repairs to Buildings—									15,144 06	1 51	09
Upkeep of Penang Offices—	Penang Offices	3,219 11	27	3,275 66	33	06	e	Staff Quarters, exclusive of Cooly Lines and							40,343 75	3 67	345 37	03	10
	Penang Offices	3,219 11	27	3,275 66	33	06	f	Quarters for Menial Staff							16,188 86	1 42	10,476 38	1 05	58
	Total	3,219 11	27	3,275 66	33	06	g	Station Buildings, including Goods Sheds,							968 61	09	1,900 63	19	
Contingencies—	Books	90 00	01			01	h	Running Sheds and Carriage Sheds							10,736 40	95	1,115 98	11	
	Periodicals	328 51	03	462 27	05	12	i	Gate Huts and Pointsmen's Boxes							2,161 96	13	70,470 52	7 03	14
	Scavenging and Purchase of Pails	3,817 18	34	2,230 59	22	04	j	Cooly Lines, Quarters for Menial Staff, Watch-							1,418 88	6 45	4,628 60	46	02 69
	Stationery	5,222 15	46	4,243 30	42	02	k	men, Pointsmen, Porters and Workmen									661 04	06	
	Advertising	172 72	02	8 76		02	l	Workshops, Stores and Offices									8,613 48	86	1 39
	Printing	263 19	02	247 03	02	01	m	Miscellaneous									6,502 73	05	05 01 16
	Furniture	263 65	02	384 95	04	03	n	Platforms and Buildings, Station									531 60	05	
	Uniforms	1,164 41	10	1,127 23	11	06	o	Fencing Stations									314 93	03	
	Medical Stores	1,179 01	10	1,335 62	13	04	p	Bridges, Ironwork, Repairs									7,803 52	78	
	Water Rates	1,544 81	14	781 37	08		q	Bridge Painting, etc.											
Contingent Expenses	1,423 24	13	876 30	09		r	Tunnels									29,055 90	2 89	52	
Total		15,468 87	1 37	11,697 42	1 16	21	s	Turn-ables											
Motor Service—	Upkeep of Roads and Buildings	515 38	05			05	t	Bridge Masonry									2,119 72	21	18
	Upkeep of Roads and Buildings	515 38	05			05	u	Protection of Bridges									3,073 08	31	07
	Total	515 38	05			05	a	Total									3,050 12	20	
Maintenance, Way, Wages—	Running Road Maintenance	404,989 77	36 80	390,360 89	39 01	2 21	b	Platforms and Buildings, Station							595 13	05	4,325 81	43	
	Sleeper Renewing	13,029 36	1 19	28,633 53	2 86	1 67	c	Bridges, Masonry							6,183 63	54	667 68	07	
	Ballasting	37,881 83	3 44	21,485 26	2 15	29	d	Bridges, Ironwork, Repairs							279 11	02			
	Jungle Felling	40,372 32	3 67	36,190 77	3 62	05	e	Bridge Painting							5,883 09	52			
	Slips	72,324 78	6 57	46,380 65	4 64	93	f	Tunnels							42 21		12,236 41	1 22	05
	Cessing	28,971 38	2 63	13,181 70	1 31	32	g	Turn-ables							1,546 15	14			
	Points and Crossings	3,510 93	31	2,603 84	16	15	h												

APPENDIX W.

COMPARATIVE STATEMENT OF EXPENDITURE ON ENGINES, CARRIAGES, WAGONS, BUT EXCLUDING STEAM FERRIES, FOR THE YEARS 1912 AND 1913.

Year.	Miles Open.	No. of Engines Open Line.	No. of Engines Repaired.	Engine Miles.	Train Miles.	Train Miles per Engine.	Wages (Loco.).			Fuel.			
							Total Amount.	Wages per Engine Mile.	Wages per Train Mile.	Total Tons of Fuel.	Total Cost of Fuel.	Cost per Engine Mile.	Cost per Train Mile.
	M. CH.						\$ c.	cts.	cts.	Firewood. tons. cwt.qrs.lbs.	Firewood. \$ c.	cts.	cts.
1912	734 15	128	42	3,639,137	3,194,200	24,954	368,148 76	10.12	11.52	70,435 3 2 3 Coal. 47,281 14 2 6 Total. 117,716 18 0 9	184,060 50 Coal. 333,796 74 Total. 517,857 24	4.23	16.21
1913	771 00	153	59	3,885,277	3,351,045	21,902	441,251 16	11.36	13.17	64,019 3 1 7 Coal. 68,928 4 2 24 Total. 133,037 8 0 3	177,781 94 Coal. 627,489 28 Total. 805,271 22	20.73	24.03

Year.	Consumption.		Running Stores.			Cost of Loco. Repairs (Wages and Materials).				Total Cost of Working, Fuel, Stores, Repairs and Renewals.			
	Per Engine Mile.	Per Train Mile.	Total Amount.	Per Engine Mile.	Per Train Mile.	Total Cost.	Average Cost per Engine Repaired.	Cost per Engine Mile.	Cost per Train Mile.	Total Amount.	Cost per Engine.	Cost per Engine Mile.	Cost per Train Mile.
	lbs.	lbs.	\$ c.	cts.	cts.	\$ c.	\$ c.	cts.	cts.	\$ c.	\$ c.	cts.	cts.
1912	F. 116.68 } C. 46.31 } 51.49	F. 141.85 } C. 50.87 } 96.36	69,567 80	1.91	2.17	250,065 34	6,411 93	6.87	7.83	1,205,639 14	9,419 06	33.13	37.74
1913	F. 114.15 } C. 58.73 } 86.44	F. 137.63 } C. 66.87 } 102.25	107,885 59	2.78	3.22	334,045 75	6,186 03	8.60	9.97	1,688,453 72	11,035 65	43.46	50.39

Year.	Carriages.				Wagons.				Establishment and Other Charges.		Total Cost of the Loco., Carriage and Wagon Depts.		
	No. of Vehicles.	Total Cost of Repairs (Wages and Materials).	Cost per Vehicle.	Cost per Train Mile.	No. of Vehicles.	Total Cost of Repairs (Wages and Materials).	Cost per Vehicle.	Cost per Train Mile.	Total Amount.	Per Train Mile.	Total Cost.	Cost per Engine Mile.	Cost per Train Mile.
		\$ c.	\$ c.	cts.		\$ c.	\$ c.	cts.	\$ c.	cts.	\$ c.	cts.	cts.
1912	203	135,433 70	667 11	4.24	1,027	93,698 90	98 44	3.00	164,630 18	5.15	*1,599,401 92	43.95	50.07
1913	242	187,702 30	775 63	5.60	886	120,993 46	145 07	3.61	258,738 96	7.72	+2,255,888 44	58.06	67.32

- * This is exclusive of \$254,287.51 spent on Special Service, Revenue Account, during 1912. If this sum is included, the Expenditure per train mile works out at 58.03 cents.
- † This is exclusive of \$476,324.98 spent on Special Service, Revenue Account, on the following works during 1913:
- | | | | |
|---|--------------|---|----------|
| 1. Two "H" Class duplicate boilers | \$ 21,571.61 | 10. Construction of new bodies for refrigerator Vans (Revote) | 6.09 |
| 2. Two Steam Breakdown Cranes of 5 Tons and 20 Tons capacity | 31,254.01 | 11. Converting 14 Timber Wagons to carry sleepers (Revote) | 2,188.31 |
| 3. Two Merryweathers "Valliant" steam pumps | 4,295.39 | 12. Ten Steel Lighters (Special provision) | 6,066.00 |
| 4. Motor Trains | 357.10 | 13. Payment to Mr. L. Preece for report in connection with Electric Power and Lighting at Port Swettenham (Special provision) | 450.00 |
| 5. One hundred and sixty two Goods Vehicles to replace condemned stock | 312,045.31 | | |
| 6. New Postal Van for use on the through service Penang to Kuala Lumpur | 6,093.01 | | |
| 7. Ten Steel Lighters | 85,139.46 | | |
| 8. Reconstructing Goods Vehicles (Revote) | 6,416.12 | | |
| 9. Furniture for District Locomotive Superintendent's Office (Revote) | 442.57 | | |
- If this sum is included, the Expenditure per train mile works out at 81.53 cents in 1913 against 58.03 cents in 1912.

APPENDIX X.

COMPARATIVE STATEMENT OF EXPENDITURE ON STEAM BOATS
AND TONGKANGS FOR THE YEARS 1912 AND 1913.

Year.	Steam Boats.	Tongkangs.	Total Amount of Expenditure.		
			Total Cost of Working.	Total Miles run at Penang and Singapore.	Cost per Mile.
			\$ c.		\$ c.
1912	8	59	100,067 59	48,881	2 05
1913	8	59	118,246 64	51,290	2 30

NOTE.—Two wooden and six steel tongkangs purchased in 1913.

Four wooden tongkangs Nos. 36, 37, 46 and 66 sunk at Port Swettenham in 1913.

Two wooden and two steel tongkangs broken up in 1913.

APPENDIX Y.

I.—COMPARATIVE STATEMENT OF ENGINES REPAIRED FOR THE
YEARS 1912 AND 1913.

Year.	No. of Engines Passed through the Shops.	Repairs.			Total No. of Engines Repaired.	No. of Engines Painted and Varnished.	No. of Engines Touched up and Re-varnished.	No. of Engines under Repairs in Shops on the 1st Jan., 1914.
		Heavy.	Medium.	Light.				
1912	42	22	5	15	42	27	Nil	19 in 1913
1913	59	32	6	21	59	32	10	23 in 1914

II.—COMPARATIVE STATEMENT OF CARRIAGES REPAIRED FOR THE
YEARS 1912 AND 1913.

Year.	No. of Carriages Passed through the Shops.	Heavy Repairs.	Light Repairs.	No. of Carriages under Repair in Shops on the 1st Jan., 1914.
1912	203	175	28	43 in 1913
1913	242	217	25	22 in 1914

III.—COMPARATIVE STATEMENT OF WAGONS REPAIRED FOR THE
YEARS 1912 AND 1913.

Year.	No. of Wagons Passed through the Shops.	Heavy Repairs.	Light Repairs.	No. of Wagons under Repair in Shops on the 1st Jan., 1914.
1912	1,027	553	474	223 in 1913
1913	886	608	278	193 in 1914

APPENDIX Z.

COMPARATIVE STATEMENT OF ROLLING STOCK FOR THE YEARS 1912 AND 1913.

* Seven Travelling Cranes shown in 1912 report are now entered with the general list of Cranes.

APPENDIX Z (i).

LIST OF MACHINERY IN WORKSHOPS FOR 1913.

No. of Machine.	Description of Machine.	No. of Machine.	Description of Machine.
MACHINERY IN MACHINE SHOP.			
1.	Wheel Lathe, 5' 2" face	43.	Slotting Machine
2.	" 4' 0" "	44.	Boring, Turning and Milling Machine
3.	" 5' 2" "	45.	Emery Grinding Machine
4.	" 5' 2" "	46.	Walking Crane
5.	" 5' 2" "	47.	Turning Lathe, 8 $\frac{1}{2}$ "
6.	" 6' 0" "	48.	Boring Machine
7.	Turning Lathe, 18"	49.	Vertical Drilling Machine
8.	" 16"	50.	" "
9.	" 12"	51.	Tyre Drilling Machine
10.	" 12"	52.	Brass Finishing Lathe
11.	" 10"	53.	Turning Lathe, 8"
12.	" 10"	54.	Shaping Machine
13.	" 8 $\frac{1}{2}$ "	55.	Turning Lathe, 8 $\frac{1}{4}$ "
14.	" 7 $\frac{1}{2}$ "	56.	Grind Stone
15.	" 7 $\frac{1}{2}$ "	57.	" "
16.	" 7"	58.	Automatic Sawing Machine
17.	" 7"	59.	Hartness Turret Lathe
18.	" 10 $\frac{1}{2}$ ", Hollow Spindle	60.	Turning Lathe, 12"
19.	" 10 $\frac{1}{2}$ ", Solid Head	61.	Vertical Drilling Machine
20.	Double-headed Turning Lathe	62.	Brass Finishing Lathe
21.	" "	63.	Slotting Machine
22.	Hartness Turret Lathe "	64.	Screw Cutting Lathe, 8 $\frac{1}{4}$ "
23.	" "	65.	" "
24.	Radial Arm Drill	66.	" "
25.	" "	67.	" "
26.	Vertical Drilling Machine Round Table	68.	Vertical Drilling Machine
27.	Slot Drilling Machine	69.	Universal Grinding Machine
28.	Sensitive Drilling Machine	70.	"Apollo" Sliding and Screw Cutting Lathe
29.	" "	71.	" "
30.	Milling Machine "	72.	" "
31.	" "	73.	" "
32.	" "	74.	" "
33.	" "	75.	" "
34.	Shaping Machine	76.	Hexagon Turret Lathe, 3 $\frac{1}{2}$ "
35.	" "	77.	Horizontal Milling Machine
36.	" "	78.	Shaping Machine Small
37.	Planing Machine	79.	15 H.-P. Motor Driving Shaftings
38.	" "	80.	25 H.-P. " "
39.	" "	81.	Double Vertical Turning and Boring Machine
40.	" 12' 0" x 3' 0" x 3' 0"		
41.	Slotting Machine		
42.	" "		

MACHINERY IN ERECTING SHOP.

82.	One 20-ton Overhead Travelling Crane, Three Motor Type, with Auxiliary 6-ton Lift	88.	One Straightening Press
83.	" "	89.	One Grinding Machine
84.	One-Two "Speed (520-1,140) Portable Drill	90.	One Milling Cutters and Grinding Machine
85.	One Pump Testing Machine	91.	One Norton Emery Grinding Machine for Milling Cutters
86.	One Vacuum Gauge Testing Machine	92.	One Tool and Twist Drill Grinding Machine
87.	One Steam Gauge Testing Machine		

MACHINERY IN FOUNDRY.

93.	One Radial Crane	95.	One Cupola Blower
94.	One 5-ton Cupola		

MACHINERY IN PATTERN MAKER'S SHOP.

96.	Wood Trimming Machine	97.	Pattern Maker's Lathe, 12" Centres
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APPENDIX Z (i)—(cont.)

No. of Machine.	Description of Machine.	No. of Machine.	Description of Machine.
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MACHINERY IN COPPER AND TIN-SMITH SHOP.

98.	Three Copper-smith Fire	104.	Bolt Screwing Machine
99.	Two Brazing Furnace	105.	Screwing Machine
100.	One Bolt and Nut Making Machine Fire	106.	Bolt Pointing Machine
101.	One Tube Testing Machine	107.	Bolt and Nut Making Machine, $1\frac{1}{4}$ "
102.	One Automatic Saw and Tube Cutting Machine	108.	" "
103.	Cutting Up Machine	109.	Bolt and Tube Screwing Machine

MACHINERY IN AUTOMOBILE SHOP.

110.	Drilling Machine	112.	Portable Hand Forge
111.	Portable Crane to lift $1\frac{1}{2}$ Tons	113.	One 16 H.-P. Soft Tyre Pressing Machine

MACHINERY IN SMITH SHOP.

114.	Twenty-five Smith Fires	122.	One Shop Boiler
115.	Twenty-five Round Fires	123.	"
116.	Motor Car Hydraulic Tyre Press	124.	One Tyre Furnace
117.	Steam Hammer	125.	One Case Hardening Furnace
118.	"	126.	One Spring Furnace
119.	"	127.	One 3-ton Travelling Crane
120.	"	128.	One Spring Testing Machine
121.	"	129.	One Furnace

MACHINERY IN BOILER SHOP.

130.	Pump for Motor Car Tyre Press	147.	One 12-ton Overhead Travelling Electric Crane
131.	Cold Saw	148.	One Vertical Air Compressor Receiver
132.	Grinding Stone	149.	One Pneumatic No. 3 Side-feed Drill, No. 3,031, Reversible
133.	Radial Arm Drilling Machine	150.	One Pneumatic No. 3 Side-feed Drill, No. 3,032, Reversible
134.	" " " " "	151.	One 14" Pneumatic "Hatseler" Hammer, size 3 H No. A 3,281
135.	$\frac{3}{4}$ " Punching and Shearing Machine	152.	One "Thoe" 4 Cylinders Pneumatic Drill
136.	" " " "	153.	One 21" Pneumatic "Hatseler" Hammer size 8 H No. 8,768
137.	Plate Bending Rolls	154.	One Cold Sawing Machine
138.	$\frac{3}{4}$ " " " "		
139.	Five Boiler Fires		
140.	Hydraulic Pump		
141.	" Accumulator		
142.	$1\frac{1}{4}$ " Punching and Shearing Machine		
143.	Hydraulic Rivetter, 8" Gap, Fixed		
144.	" " 4" Gap, Portable		
145.	Hydraulic Rivetter Portable		
146.	One 15-ton Overhead Travelling Crane, Three Motor Type, with Auxiliary 5-ton Lift		

MACHINERY IN SAW MILL.

155.	Wood Turning Lathe	174.	Band Sawing Machine
156.	Saw Sharpener	175.	Mortising and Boring Machine
157.	"	176.	Hand-feed Planer
158.	"	177.	Panel Scraping Machine
159.	Grind Stone	178.	Circular Saw Rack Bench
160.	Sensitive Drill	179.	Plane Arm Tool Grinder
161.	Mortising, Boring and Boxing Machine	180.	Fly Press for Gillotting Saws
162.	Self-acting Saw Bench	181.	Electric Winch
163.	Big Planing Machine	182.	Band Saw Setting and Sharpening Machine
164.	Double-circular Moulder	183.	Saw Set
165.	Circular Saw Bench	184.	Paint Grinding Machine
166.	" " " "	185.	Circular Saw
167.	Horizontal Board Cutting Machine	186.	Vertical Saw Machine
168.	Band Planing Machine	187.	Mitre Cutting
169.	Circular Saw Bench	188.	Singer's Sewing Machine
170.	Hand-feed Planer	189.	Horse Hair Machine
171.	Small Mortising and Boring Machine	190.	Chilsea Joiner
172.	Big Tenoning Machine	191.	One Drilling Machine
173.	Panel Planing Machine		

APPENDIX Z (i)—(cont.)

MACHINERY IN POWER HOUSE.

No. of Machine.	Description of Machine.	
192.	One 100-K.W. 5,500/430 Volts, Three Phase Static Transformer	No. 29,153
193.	" " " " "	No. 29,153
194.	" " " " "	No. 36,122
195.	One 25-K.W. " " "	No. 29,151
196.	One 75-K.W. 450 Volts, Three Phase "Oerliken" Generator	No. 28,998
197.	One 40-H.-P. Robey undertype Engine, Two Cylinders	
198.	One 60-ton Traverser, with 20 H.-P. Motor	No. 21
199.	One 5 H.-P., 1,150 Revolutions per minute, Motor (spare)	
200.	One 5 H.-P., 756 " " Motor used for charging accumulators	
201.	One 1 H.-P., 1,140 " " Motor (spare)	
202.	One 25 H.-P., 470 " " Motor used for Air Compressor (Power House)	
203.	One 56-K.W. 230 Volts "General Electric" continuous Current Generator	
204.	One 9-K.W. 110 Volts "Victoria Brush"	
205.	One Lathe	
206.	One Drilling Machine	
207.	One 1½ H.-P., 1,150 Revolutions per Minute Motor	

MACHINERY IN KUALA LUMPUR RUNNING SHED.

- 208. One Turning Lathe
- 209. One Vertical Drilling Machine
- 210. One Grind Stone
- 211. One Blacksmith Forge

MACHINERY IN IPOH RUNNING SHED.

- 212. One Planing Machine
- 213. Three Drilling Machines
- 214. One Screw Cutting Machine
- 215. Two Lathes (Turning)
- 216. One Grind Stone
- 217. One Blower (Blacksmith)
- 218. One Blower (Coppersmith)
- 219. One Forge (Coppersmith)
- 220. One Forge Blacksmith
- 221. Two Portable Forges
- 222. One Wheel Lathe

MACHINERY IN TELOK ANSON RUNNING SHED.

- 223. One Portable Forge
- 224. One Drilling Machine

MACHINERY IN TAIPING RUNNING SHED.

- 225. One Drilling Machine (Bench)
- 226. One Turning Lathe
- 227. One Drilling Machine

MACHINERY IN PRAI RUNNING SHED.

- 228. One-foot Power Screw Cutting Lathe, 5¼" Centre
- 229. One Hand Drilling Machine

MACHINERY IN SEREMBAN RUNNING SHED.

- 230. One Drilling Machine
- 231. One Hand Forge

MACHINERY IN JOHORE BAHRU RUNNING SHED.

- 232. One Lathe Screw Cutting
- 233. One Portable Forge
- 234. One Blacksmith Forge
- 235. One Grind Stone
- 236. Two Anvils

APPENDIX Z (i)—(cont.)

MACHINERY IN SINGAPORE RUNNING SHED.

No. of Machine.	Description of Machine.
237.	One Shop Steam Engine Stationary under Type
238.	One Screw Cutting Turning Lathe
239.	One Small Lathe
240.	One Wheel Lathe
241.	One Planing Machine
242.	One Slotting Machine
243.	One Drilling Machine
244.	One Hand Bolt Screwing Machine
245.	One Steam Hammer
246.	One Fan for Blacksmith's Fire
247.	One Small Circular Saw Bench
248.	One Grinding Stone
249.	One Emery Wheel Cutter

LIST OF ENGINES, PUMPS, ETC., FOR SUPPLYING WATER
ON 31ST DECEMBER, 1913.

Place.	No.	Description.
Penang	1	Oil Engine driven Pump, Penang Office
Prai	1	Double-barrel Hand Pump
"	1	Merryweather Pump for Washing out Engines
Parit Buntar	1	Merryweather Pump for Pumping Water into Tanks
Pondok Tanjong	1	Double-barrel Hand Pump
Taiping	1	Merryweather Pump for Washing out Engines
Kuala Kangsar	1	Steam Pump and Boiler
Sungei Siput	1	Double-barrel Hand Pump
Ipoh	1	Tangye Steam Pump
"	1	Steam Boiler
"	1	Pump Square
"	1	Merryweather Pump for Washing out Engines
"	2	Shop Boilers and Engines
Tronoh	1	Oil Engine and Pump
"	1	Double-barrel Hand Pump
Kampar	1	" "
Tapah Road	1	Loco Boiler
"	1	Pulsometer Pump
"	1	Double-barrel Hand Pump
Tanjong Malim	1	Tangye Steam Pump with Vertical Boiler
"	1	Pulsometer Pump
"	1	Hand Pump
"	1	Upright Boiler
Rawang	2	Pulsometer Pumps with Vertical Boiler
Kuala Lumpur	2	Steam Pumps with Vertical Boilers
"	1	Merryweather Pump for Washing out Engines
"	1	Double-barrel Hand Pump
Batu Tiga	1	Pulsometer Pump with Vertical Boiler
"	1	Double-barrel Hand Pump
Klang North	1	Double-barrel "
Central Workshops	2	Motor-driven Pump for Supplying Central Work-shops with Water from Gombak River
"	2	Merryweather Pumps
Kajang	1	Double-barrel Hand Pump
Seremban	1	Merryweather Pump for Washing out Engines
"	1	Double-barrel Hand Pump
Kuala Sawah	1	" "
Batang Pinang	1	" "
Tampin	1	Duplex Pump with Horizontal Boiler
"	1	Double-barrel Hand Pump
Kuala Pilah	1	" "
Bahau	1	" "
Triang	1	" "
Kuala Krau	1	Tangye Steam Pump with Vertical Boiler
Gemas	1	Double-barrel Hand Pump
"	1	Tangye Steam Pump with Vertical Boiler
"	1	Merryweather Pump for Washing out Engines

APPENDIX Z (i)—(cont.)

LIST OF ENGINES, PUMPS, ETC., FOR SUPPLYING WATER
ON 31ST DECEMBER 1913—(cont.)

Place.				No.	Description.
Gemas	...	...	...	1	Double Cylinder (Duplicate) Vertical Steam Pump
"	...	...	...	1	Jewel Pressure Filter Dia. 16"
Labis	...	...	...	2	Pulsometer Pumps with one Vertical Boiler
"	...	...	...	1	Double-barrel Hand Pump
Niyor	...	...	...	1	Tangye Steam Pump with Vertical Boiler
"	...	...	...	1	Double-barrel Hand Pump
Lyang Lyang	...	...	...	1	Steam Pump with Vertical Boiler
"	...	...	...	1	Double-barrel Hand Pump
Johore Bharu	...	...	...	1	"
Woodlands	...	...	...	2	Pulsometer Pumps with one Vertical Boiler

LIST AND CONDITION OF LOCOMOTIVE ENGINES AND TENDERS ON THE 31st DECEMBER, 1913.

LIST AND CONDITION OF LOCOMOTIVE ENGINES AND RAILWAYS														
Stock No.	Maker's Name.	Maker's No.	Class.	Description.	Cylinders.			No. of Wheels on Engine.	Type.	Diameter of Wheels.			Commenced to Run.	Condition.
					Position.	Diameter.	Length of Stroke.			Leading Bogie.	Coupled.	Trailing Bogie or Pony.		
						in.	in.			in.	in.	in.		
1	Ransomes and Rapier	150	...	Tank Engine	Outside Frame	9	14	6	0 6 0	...	27	...	1881	In Shop
3	R. and W. Hawthorn	2,046	...	"	"	14	20	6	0 6 0	...	40	...	1893	Good
4	Hunslet Engine Co.	623	A	"	"	10	16	8	4 4 0	23	39	...	1895	Poor
5	"	342	A	"	"	10	16	8	4 4 0	23	39	...	1885	Fair
6	"	377	A	"	"	10	16	8	4 4 0	23	39	...	1885	Altered into C. D. 16 and sent to Alor Star
7	"	378	A	"	"	10	16	8	4 4 0	23	39	...	1885	Poor
8	"	379	A	"	"	10	16	8	4 4 0	23	39	...	1885	Fair
9	"	408	A	"	"	10	16	8	4 4 0	23	39	...	1886	Good
11	Neilson & Co.	3,888	A	"	"	10	16	8	4 4 0	23	39	...	1888	Fair
12	Hunslet Engine Co.	537	A	"	"	10	16	8	4 4 0	23	39	...	1892	"
14	"	748	A	"	"	10	16	8	4 4 0	23	39	...	1900	Poor
16	"	582	A	"	"	10	16	8	4 4 0	23	39	...	1893	"
34	"	681	A	"	"	10	16	8	4 4 0	23	39	...	1898	"
35	"	682	A	"	"	10	16	8	4 4 0	23	39	...	1898	Under repair
70	"	850	A	"	"	10	16	8	4 4 0	23	39	...	1904	Good
71	"	851	A	"	"	10	16	8	4 4 0	23	39	...	1904	Poor
125	"	749	A	"	"	10	16	8	4 4 0	23	39	...	1900	In Shops
126	"	750	A	"	"	10	16	8	4 4 0	23	39	...	1901	Poor
127	"	828	A	"	"	10	16	8	4 4 0	23	39	...	1904	"
10	"	502	B	"	"	12	18	8	4 4 0	23	39	...	1890	"
13	Hawthorn, Leslie & Co.	2,232	B	"	"	12	18	8	4 4 0	23	39	...	1891	Fair
15	Hunslet Engine Co.	897	B	"	"	12	18	8	4 4 0	23	39	...	1906	"
27	"	898	B	"	"	12	18	8	4 4 0	23	39	...	1906	In Shops
128	"	896	B	"	"	12	18	8	4 4 0	23	39	...	1906	Poor
129	"	936	B	"	"	12	18	8	4 4 0	23	39	...	1907	"
130	R. and W. Hawthorn, Leslie & Co.	2,831	B	"	"	12	18	8	4 4 0	23	39	...	1911	"
17	Neilson & Co.	4,625	C	Tender Engine	"	12	18	8	4 4 0	23	39	...	1893	"
18	"	4,626	C	"	"	12	18	8	4 4 0	23	39	...	1893	In Shops
19	Kitson & Co.	3,521	C	"	"	12	18	8	4 4 0	23	39	...	1894	"
20	"	3,522	C	"	"	12	18	8	4 4 0	23	39	...	1894	Poor
21	"	3,523	C	"	"	12	18	8	4 4 0	23	39	...	1894	In Shops
28	Hawthorn, Leslie & Co.	2,323	C	"	"	12	18	8	4 4 0	23	39	...	1895	Good
29	"	2,324	C	"	"	12	18	8	4 4 0	23	39	...	1895	Poor
22	Kitson & Co.	3,530	D	"	"	14	20	10	4 6 0	23	39	...	1894	"
23	"	3,531	D	"	"	14	20	10	4 6 0	23	39	...	1894	Good
24	Dubs & Co.	3,220	D	"	"	14	20	10	4 6 0	23	39	...	1895	Fair
25	"	3,221	D	"	"	14	20	10	4 6 0	23	39	...	1895	Good. Sent to Tumpat
30	Kitson & Co.	3,681	E	"	"	14½	20	10	4 6 0	27	51	...	1897	Fair
31	"	3,682	E	"	"	14½	20	10	4 6 0	27	51	...	1897	"
32	Sharp, Stewart & Co.	4,267	F	"	"	14	20	8	4 4 0	27	51	...	1897	Poor
33	"	4,268	F	"	"	14	20	8	4 4 0	27	51	...	1897	Good
36	Hunslet Engine Co.	691	G	"	"	14½	20	10	4 6 0	27	51	...	1899	Under repair
37	"	692	G	"	"	14½	20	10	4 6 0	27	51	...	1899	Poor
38	"	693	G	"	"	14½	20	10	4 6 0	27	51	...	1899	Good
39	"	694	G	"	"	14½	20	10	4 6 0	27	51	...	1899	In Shop
40	Kitson & Co.	3,863	G	"	"	14½	20	10	4 6 0	27	51	...	1899	In Shops
41	"	3,864	G	"	"	14½	20	10	4 6 0	27	51	...	1899	Poor
42	"	3,865	G	"	"	14½	20	10	4 6 0	27	51	...	1899	Good
43	"	3,866	G	"	"	14½	20	10	4 6 0	27	51	...	1901	In Shops
44	"	3,984	G	"	"	14½	20	10	4 6 0	27½	51½	...	1901	Poor
45	"	3,985	G	"	"	14½	20	10	4 6 0	27½	51½	...	1901	In Shops
46	Robert, Stephenson & Co.	3,007	G	"	"	14½	20	10	4 6 0	27½	51½	...	1901	Fair
47	"	3,008	G	"	"	14½	20	10	4 6 0	27½	51½	...	1901	Poor
48	"	3,009	G	"	"	14½	20	10	4 6 0	27½	51½	...	1902	"
49	Kitson & Co.	4,110	G	"	"	14½	20	10	4 6 0	27½	51½	...	1902	"
50	"	4,111	G	"	"	14½	20	10	4 6 0	27½	51½	...	1902	"
51	Neilson, Reid & Co.	6,105	G	"	"	14½	20	10	4 6 0	27½	51½	...	1902	In Shops
52	"	6,106	G	"	"	14½	20	10	4 6 0	27½	51½	...	1902	Poor
53	"	6,107	G	"	"	14½	20	10	4 6 0	27½	51½	...	1902	Good
54	"	6,108	G	"	"	14½	20	10	4 6 0	27½	51½	...	1902	Poor
55	"	6,109	G	"	"	14½	20	10	4 6 0	27½	51½	...	1902	In Shops
56	"	6,110	G	"	"	14½	20	10	4 6 0	27½	51½	...	1903	Poor
57	Kitson & Co.	4,189	G	"	"	14½	20	10	4 6 0	27½	51½	...	1903	"
58	"	4,190	G	"	"	14½	20	10	4 6 0	27½	51½	...	1903	Good
59	"	4,238	G	"	"	14½	20	10	4 6 0	27½	51½	...	1903	Fair
60	"	4,239	G	"	"	14½	20	10	4 6 0	27½	51½	...	1904	Under repair
61	"	4,279	G	"	"	14½	20	10	4 6 0	27½	51½	...	1904	Fair
62	"	4,280	G	"	"	14½	20	10	4 6 0	27½	51½	...	1905	Poor
63	Hunslet Engine Co.	860	G	"	"	14½	20	10	4 6 0	27½	51½	...	1905	"
64	"	861	G	"										

WEIGHT OF LOCOMOTIVE ENGINES AND TENDERS ON THE 31st DECEMBER, 1913.

WEIGHT OF LOCOMOTIVE ENGINES AND TENDERS ON THE GREAT NORTHERN RAILWAY																			
Class.	Engines.												Tenders.				Total Weight of Engine and Tender.		Total No. of Engines in each class
	Empty.						In Working Order.						Empty.		In Working Order.				
	Bogie.	Leading.	Driving.	Trailing.	Trailing Bogie or Pony.	Total.	Bogie.	Leading.	Driving.	Trailing.	Trailing Bogie or Pony.	Total.	On each Pair of Wheels or Bogie.	Total.	On each Pair of Wheels or Bogie.	Total.	Empty.	In Working Order.	
	T. Cwt.	T. Cwt.	T. Cwt.	T. Cwt.	T. Cwt.	T. Cwt.	T. Cwt.	T. Cwt.	T. Cwt.	T. Cwt.	T. Cwt.	T. Cwt.	T. Cwt.	T. Cwt.	T. Cwt.	T. Cwt.	T. Cwt.	T. Cwt.	
Odd weights not at present available ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
A ...	5 06	...	5 09	5 09	...	16 04	5 10	...	7 10	7 05	...	20 05	...	...	...	...	16 04	20 05
A ...	5 06	...	5 09	5 09	...	16 04	5 10	...	7 10	7 05	...	20 05	...	...	...	...	16 04	20 05
B ...	6 08	...	7 18	6 09	...	20 15	7 00	...	8 19	8 17	...	24 16	...	...	...	...	20 15	24 16
C ...	6 06	...	6 11	5 18	...	18 15	6 10	...	8 10	7 16	...	22 16	3 10	7 00	6 15	13 10	25 15	36 06	
D ...	5 14	6 00	6 00	5 15	...	23 09	6 14	6 16	7 02	6 19	...	27 11	3 12	7 04	7 05	14 10	30 13	42 01	
E ...	6 15	6 06	6 15	6 04	...	26 00	7 01	7 05	7 06	7 03	...	28 15	3 15	7 10	7 10	15 00	33 10	43 15	
E (Burma) ...	...	...	...	...	...	14 05	...	6 05	6 15	2 12	...	15 12	...	5 16	5 02	10 05	20 01	25 17
F ...	7 00	...	7 12	7 08	...	22 00	7 06	...	9 05	9 03	...	25 14	3 15	7 10	7 10	15 00	29 10	40 14	
G ...	7 02	6 13	6 13	6 10	...	26 18	7 08	7 10	7 10	7 09	...	29 17	3 11	10 14	7 06	21 18	37 12	51 15	
H ...	6 18	8 11	8 08	8 14	7 19	40 10	7 08	9 14	9 14	9 13	9 09	45 18	8 06	16 13	14 14	29 08	57 03	75 06	
H ...	8 13	9 04	9 09	8 12	7 12	43 10	8 16	10 10	10 10	10 10	8 14	49 00	8 06	16 13	14 14	29 08	60 03	78 08	
I ...	...	9 16	9 04	7 15	6 11	33 06	...	10 12	10 12	10 11	10 00	41 15	...	...	...	...	33 06	41 15
I ...	...	10 07	9 02	6 00	8 06	33 15	...	10 12	10 08	10 09	13 10	44 19	...	...	...	...	33 15	44 19
J ...	5 06	...	5 09	5 09	2 15	19 00	6 00	...	6 12	6 14	4 06	23 12	...	...	...	...	19 00	23 12
K ...	6 10	...	6 13	5 15	5 00	23 18	7 00	...	8 13	7 10	5 09	28 12	...	...	...	...	23 18	28 12
O† ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
O (Burma)† ...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...

† Weights not at present available.

* Working on Construction Line.

† Weights not at present available.

APPENDIX Z (iv).

STATEMENT SHOWING STAFF AND LABOUR FORCE EMPLOYED IN THE
RAILWAY DEPARTMENT ON 31st DECEMBER, 1913.

	Europeans.	Eurasians.	Indians and Ceylonese.	Chinese.	Malays.	Burmese.	Philipinos.
General Manager's Office	4	2	11	3			
Engineering Department	41	13	6,964	216	113		
Chief Accountant and Auditor's Department... ..	4	1	62	16			
Traffic Department	28	32	1,751	754	67		
Locomotive Department	54	93	2,173	515	222	1	
Store Department	3	...	89	3			
Signal and Telegraph Department	7	3	384	51	39		
Construction Department*	49	16	2,951	2,521	785	...	1
Total ...	190	160	14,385	4,079	1,226	1	1

* Including Construction Labour Force.